

# WaterSMART Grants: Water and Energy Efficiency

## Project Name:

Orange County Sustainable Landscapes Program

## Project Location:

Orange County, California

## Applicant Name:

Municipal Water District of Orange County



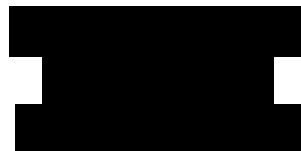
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## Date:

September 16, 2020

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# Technical Proposal

## Executive Summary

**Date:** September 16, 2020

**Applicant Name:** Municipal Water District of Orange County (MWDOC)

**City, County, State:** Fountain Valley, Orange County, California

**Project Name:** Orange County Sustainable Landscapes Program

**Funding Group:** This Proposal is seeking funding under Funding Group II.

**Project Summary:** MWDOC proposes the implementation of the Orange County Sustainable Landscapes Program (Program), which will facilitate comprehensive and sustainable landscape improvements across residential and commercial properties throughout Orange County, California. Via a rebate format, this Program will promote water conservation through the transformation from high-water-use landscaping and irrigation to California Native/Friendly landscapes, high efficiency irrigation, and alternatives to potable irrigation supply. This Program will result in the transformation of up to 1.5 million square feet of turfgrass to CA Friendly landscapes incorporated with watershed approach designs and high efficiency irrigation; the upgrade of approximately 5,500 antiquated irrigation timers to smart irrigation controllers; and the conversion of approximately 12 sites, or 24 potable dedicated irrigation to an alternative sustainable source (rainwater capture, stormwater runoff, recycled water). These measures will result in reductions of approximately 1,163 acre-feet per year (AFY) of potable water and 12,594 acre-feet (AF) over the life of the improvements, increasing water supply reliability in the region. Additionally, this Program will reduce energy consumption by up to 3.5 million kilowatt hours per year, reduce dry and wet weather runoff by approximately 173 million gallons per year, reduce carbon dioxide emissions by approximately 2,621 metric tons per year, increase urban biomass by up to 55,769 pounds, and sequester approximately 27,884 pounds of carbon. Participants in the Program will serve as examples for others to follow, thereby fostering a California Friendly landscape transformation, promoting water conservation, and further increasing water reliability in Orange County.

**Program Term:** The length of time to complete the proposed Program is up three years, with an expected start date of October 2021 and completion date of September 2024. This project is shovel ready and can begin sooner, once an agreement is signed. If the project is able to begin before October 2021, the completion date would be no more than three years following that date.

**Implementation Location:** The Program will be implemented within Orange County, California on existing residential and commercial landscapes. These sites are not located on Federal facilities.

## Project Location

A map showing the geographic location where the proposed Program will be implemented is provided as Figure 1, below. The MWDOC service area serves approximately 2.3 million people and is comprised of the 28 retail water agencies (districts and cities) of Orange County. Comprehensive Orange County has a population of 3.2 million with a 948 square-mile area and is located on the California coast between Los Angeles and San Diego Counties. The Pacific Ocean is immediately south-west, and San Bernardino and Riverside Counties are immediately north-east. This Program will be implemented within all of Orange County (including Anaheim, Santa Ana, and Fullerton). MWDOC, as the county's wholesale water agency, will act as lead agency for Program implementation.



Figure 1. Project Location.

## Technical Project Description

The objective of this project is to implement the Orange County Sustainable Landscapes Program, which includes turf landscape conversions, irrigation device improvements, and the implementation of non-potable irrigation sources for dedicated irrigation meters. The proposed Program will foster a resilient comprehensive landscape transformation water conservation program designed to continue the paradigm shift from turf intensive landscapes utilizing potable water supplies and antiquated equipment to California Native or Friendly landscapes incorporating Watershed Approach designs. This will emphasize native plantings and runoff retention and utilize natural resources such as stormwater and the benefits of living soils. To do so, the project will encourage the transformation of approximately 1.5 million square feet of turfgrass; the upgrade of up to 5,500 antiquated irrigation timers to smart irrigation controllers (weather-based irrigation timers and soil moisture sensors); the conversion of approximately 24 dedicated irrigation meters, covering about 12 landscaped sites, from utilizing a potable source to an alternative sustainable source (rainwater capture, stormwater runoff, municipally supplied recycled water).

*Turfgrass Conversion:* Turfgrass which, on average, requires more than four feet of supplementary irrigation water each year, will be removed and replaced with low-water-using Native or California Friendly plantings, which require less than half the water needed by turfgrass. Additionally, the new landscape will incorporate a Watershed Approach design that focuses on utilizing natural resources such as rainwater and living soils to promote landscape health and the reduction of stormwater runoff through low impact development (LID) and green infrastructure techniques, which promote rainwater retention and infiltration. These include, but are not limited to, infiltration strips, bioswales, rain gardens, and rain barrels. Additionally, the entire project site must be 100% permeable to air and water, and bare soil must be covered by 3-4" inches of mulch to reduce sediment runoff, maximize water savings, and promote healthy soils. Irrigation must also be converted to a low-flow system, such as drip irrigation or rotating nozzles, or be capped off to utilize hand watering, which will result in increased water savings and reductions in non-point source pollution from dry weather and stormwater runoff. Project sites will be required to install a minimum of three plants per 100 square feet, which will increase urban biomass, increase carbon sequestration, and help to mitigate urban heat island effects. To assist customers with designing a new landscape, MWDOC offers Landscape Design Assistance, which provides landscape design templates and/or a personalized design free of charge for qualifying participants. Additionally, MWDOC offers Landscape Maintenance Assistance, which provides free landscape maintenance plans to assist participants in properly caring for their new, water efficient landscapes.

*Smart Timers:* This Program will promote the installation of EPA WaterSense labeled smart irrigation controllers (weather or soil based sensors). Smart timers are irrigation controller devices that regulate irrigation water use automatically by adjusting to site conditions via either real time weather data or soil moisture conditions and determine how much irrigation to apply

based on factors such as temperature and humidity, with weather data supplied as either signal-based or sensor-based. Soil moisture irrigation controllers offer the opportunity to optimize irrigation based on measured plant demand in the irrigated system. The sensor system can result in the bypass of scheduled irrigation events based on soil moisture content. Smart timers are an effective tool to automate efficient irrigation scheduling management, and are a significant water conservation tool. MWDOC is a leader in smart timer programs, having implemented a rebate program since 2004. MWDOC has also worked closely with the United States Environmental Protection Agency to promote WaterSense labeled devices to end-users, installers, and distribution venues, encouraging market transformation. Much of the success of MWDOC's smart timer installation rate can be attributed to enhanced rebates for such devices, which has been made available through grant funding.

*Sustainable Water Source Conversion:* Selecting a sustainable water source is a component of responsible irrigation management and, in many cases, a source alternative to municipally supplied potable water can be utilized for irrigation purposes. These sources may include on-site collection, rainwater capture, treated stormwater runoff, or municipally supplied recycled water. Converting a dedicated meter point of connection to a source alternative to potable water will result in long-term 100% potable water savings, helping to diversify the region's water supply, and increase sustainability and reliability especially in times of drought. As part of this Program, sites will convert dedicated irrigation meters to sustainable water sources. Eligible properties will be large landscape commercial and public space sites (e.g. homeowner association public areas, street medians, business parks).

The Program will utilize a rebate program platform to incentivize the implementation of the previously mentioned landscape measures. Program participation begins with the submission of an on-line application (paper application available by request) by a residential property owner, commercial property owner/manager, or designated contractor (Participant). For databasing and measure verification purposes, the Participant will be required to include the following information, as applicable: conversion area measurement; existing irrigation equipment; new irrigation equipment; site plan; meter/account information; water source (including modification, if applicable); landscape material (including modification, if applicable); and site photographs depicting conversion area and existing irrigation equipment. Additionally, upon implementation of the measure, MWDOC may perform an onsite installation confirmation inspection.

Substantiation of project benefits will be measured through a statistical water savings evaluation. This evaluation will include a robust, regression-based, statistical evaluation of water use before and after the landscape improvements. Working with local water districts, MWDOC will obtain water use information for participating sites for inclusion in the evaluation. One of the primary goals of this analysis will be to quantify water savings at sites which incorporate the measures described above.

This Program will include six tasks, as described below:

### **Task 1 - Program Administration**

Program Administration, Task 1, is the total staff hours needed for the day to day operation of the Program and constitutes the salaries/wages and fringe benefits associated with the comprehensive Program administration. As part of the Program Reporting (Task 5), MWDOC will supply a data table with the actual hours per reporting period and related salary and fringe benefit rates for each staff personnel.

### **Task 2 - Marketing and Promotion**

MWDOC will design and produce marketing and promotional material that will be distributed to property owners and posted on social media. Promotional pieces will encourage property owners to participate in the Program by logging onto the MWDOC Water Use Efficiency site. The Program webpages contain information regarding Program rules and regulations, access to the Program application, information about rebate levels through the Program, and contains resources to assist customers with their water conservation project.

Marketing will primarily consist of bill inserts, social media campaigns, water bill messages, newsletter articles, and posts on water agency websites. Over the 20+ years MWDOC has marketed water use efficiency programs, marketing surveys conducted by MWDOC have rated bill inserts as the most effective forms of marketing to encourage participation. MWDOC has also increased its social media presence and can reach up to 345,000 people per month with Facebook posts, and the MWDOC website receives over 10,000 views per month. All Program promotional materials will acknowledge Reclamation's funding.

Stakeholders will be actively involved in the Project to further educate and promote participation. Stakeholders include retail water agencies, county and city municipal storm water permit holders, landscape maintenance contractors, facilities/property managers, homeowner association board members, and business owners.

### **Task 3 – Site Inspections**

All turf removal landscape conversion sites (100%) will be provided with installation verifications to determine eligibility for Program rebate funds. Additionally, a representative sample of smart timer installation sites will receive an in-person inspection, and 100% will have the purchase receipt confirmed. At a minimum, the pre-installation verification process will include databasing of the following: site contact information, measure, sector, device cost, rebates paid, installation date, make/model information (if applicable), conversion square footage (if applicable), and run-off retention method (if applicable). Additional collected information may include the following, as applicable: existing irrigation equipment, new irrigation equipment, site plan, water source (including modification, if applicable), conversion area measurement, landscape material (including modification, if applicable), and site

photographs depicting conversion area and existing irrigation equipment. Additionally, MWDOC will perform comprehensive on-site post-inspections following the completion of a conversion site. The on-site post-inspections will serve as a quality control check to verify the reliability of the installation verification process.

MWDOC currently has Mission Resource Conservation District (Mission) under contract until December 31, 2022 to provide landscape survey services for MWDOC's various landscape Programs. Mission, as a Non-Profit Special District and an arm of the Natural Resource Conservation Service, is uniquely qualified to perform irrigation surveys. They have many years of experience in both the urban and agricultural setting and provide MWDOC with highly competitive rates.

During on-site post inspections executed by MWDOC, Mission, or the retail water agency the following will be performed, as applicable:

- Walk the site with the property owner or person designated by the property owner (due to the Covid-19 pandemic, federal, state, and local safety orders will be followed)
- Verify specific aspects of conversion meet Program terms (e.g. mulch applied, irrigation converted, 100% permeable, runoff retention element installed, plant density installed)
- Measure the conversion area
- Turn on each valve/station to evaluate the condition of the irrigation system
- Perform a catch-can test to measure actual distribution uniformity for the Conversion area (as applicable)
- Place irrigation system repair flags to bring needed repairs to the attention of the property owner
- Verify installation of drip/micro-irrigation or other efficient irrigation
- Verify smart irrigation timer is installed and functioning correctly
- Verify the number of active and inactive valves per irrigation timers

#### **Task 4 – Rebate Incentive**

Over the 36-month period of the potential grant award, MWDOC proposes to facilitate the implementation of approximately 5,000 landscape and irrigation improvements. To achieve this, the Program anticipates the conversion of approximately 1.5 million square feet of turfgrass to CA Friendly landscapes; the upgrade of up to 5,500 antiquated irrigation timers to smart irrigation controllers (weather-based irrigation timers); and conversion of up to 12 landscaped sites, or approximately 24 dedicated irrigation meters, from utilizing a potable source to an alternative sustainable source (rainwater capture, stormwater runoff, recycled water). MWDOC proposes to provide incentives through a rebate-style format to residential property owners and commercial property owners/managers for qualifying conversions. The following proposed rebate amounts will be available for each participant site; these rebate levels may vary due to market transformation during the implementation-phase:



- **Turfgrass conversion**  
Up to \$3 or more per square foot
- **Smart Timers**  
Up to \$45 or more per station (commercial)  
Up to \$80 or more per timer (residential)
- **Sustainable Water Source Conversion**  
Up to \$1,300 per AF of potable water saved

Rebate incentives shall be based on the square footage, device/material costs, or actual water savings. No participant will be rebated an amount higher than what is totaled as eligible project costs. To receive the Program rebate funds, the Participant's completed site conversion and irrigation system are required to be consistent with the intent of the Program and ensure efficient landscape water use by implementing LID measures. Additionally, the Turf Conversion areas must remain in compliance with the conversion requirements for a period of at least five years. If this requirement is violated, the Participant may be required to refund all or a portion of rebate funds. This requirement is void upon transfer of ownership.

Turf Conversion area qualification criteria include:

- Site must utilize at least one Watershed Approach design measure to retain runoff (e.g. bioswales, infiltration strip, rain garden, rain barrel).
- A minimum of 3 plants per 100 square feet must be planted in the project area.
- Bare soil must be covered by mulch and/or groundcover.
- Site may not include any California invasive species.
- Conversion area must include the entirety of the irrigation zone(s), and must be converted to a low-flow irrigation system (e.g. drip, high efficiency nozzles, etc.) or be capped off. Deviations will be considered on a case by case basis.
- Conversions that have been started or are already completed are not eligible as per the Program terms and conditions. Site is required to be inspected before turf is removed.
- Conversions must comply with all applicable laws, codes, policies, covenants, conditions, and restrictions.

Smart Timers must be EPA WaterSense labeled and installed and functioning properly.

Sustainable water meter conversions must meet all guidelines and regulations regarding meter conversions and non-potable irrigation.

### **Task 5 – Program Reporting**

Following the reporting schedule set forth in the Program agreement, MWDOC will submit semi-annual and final reports that will include all required SF forms, a written Program progress narrative, tabular data tables, and all required back up to support the requested reimbursement.

## Task 6 – Program Evaluation

MWDOC staff will initiate a Program process and statistical water savings impact evaluation to quantify Program benefits. The Program process evaluation will assess the Program’s goals, format, and effectiveness, including how the Program was developed, how success was measured, who the target audience was and how they were reached, and the Program successes and challenges.

The impact evaluation will use robust statistical methods, including regression analysis, to measure the change in water use of Program sites before and after Program conversion. This will give the water industry another opportunity to quantify actual water savings associated with comprehensive landscape/irrigation improvements occurring at sites. This analysis will include a statistically significant population of Program participants, will maintain 95% confidence, and will consider weather conditions in the analysis. A written report describing the statistical methods and evaluation results will be submitted as the final report for the Program. Results from this Program will be shared with Reclamation, Metropolitan, other Program Stakeholders, and MWDOC retail water agencies.

MWDOC will conduct the analysis using qualified staff, process the Program’s data, liaise with the involved retail water agencies to obtain water consumption data, and develop the draft and final report. If a consultant is hired to aid in the any component of the evaluation, MWDOC will develop and release a request for proposals to several qualified water use evaluation consulting firms, review submitted proposals, and select the most qualified submission per the terms of MWDOC’s Administration Code.

### Evaluation Criteria

#### Evaluation Criterion A: Quantifiable Water Savings

The following provides the methodology and technical justification for the 1,163 AFY water savings associated with the implementation of this Program. Conserved water will remain in storage until needed in the future. This may mean water will remain as groundwater or in the State Water Project or Colorado River Aqueduct systems to be utilized at a further date.

#### *Turf Removal*

The average annual water savings was initially calculated utilizing the theoretical irrigation requirement (TIR) water need, taking local evapotranspiration (ET<sub>o</sub>) and rainfall (P<sub>e</sub>) into consideration. As part of this analysis, the crop coefficients (K<sub>c</sub>) vary from turfgrass (0.8) versus a California Friendly landscape comprised of low water need plants (0.3).

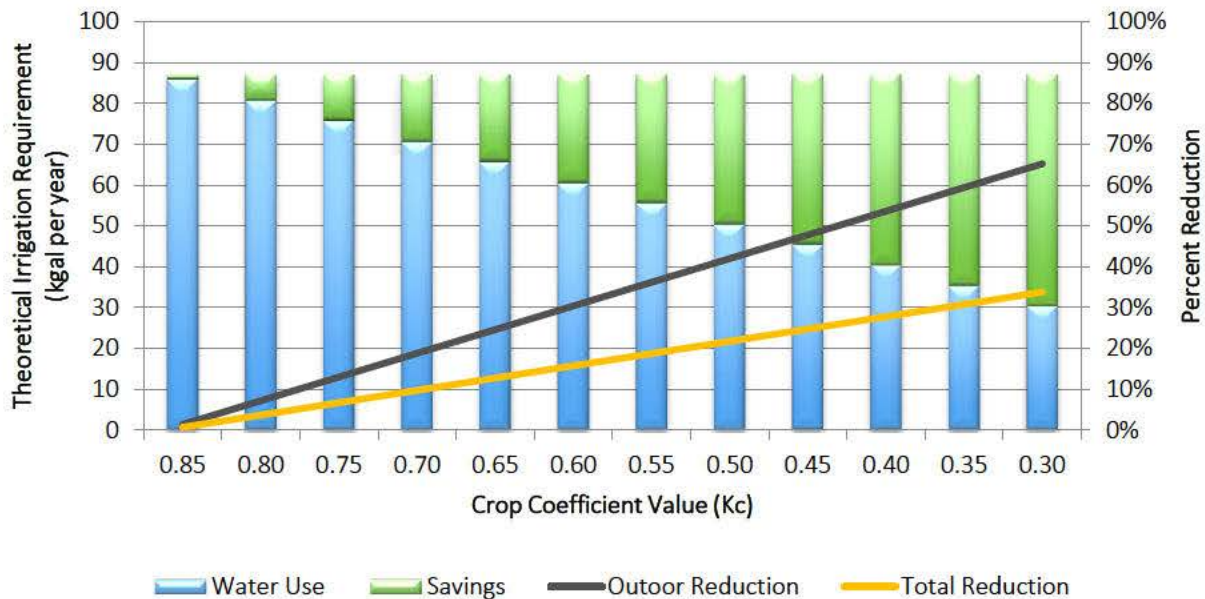
$$TIR = (ET_o \times K_c - P_e) / IE$$
$$WS = (TIR_{final} - TIR_{initial}) / TIR_{final}$$

where,

WS = Water Savings (%)

IE = Irrigation Efficiency (%)

Figure 2 depicts the general relationship between the theoretical irrigation requirement and potential reduction of water for various Kc values<sup>1</sup>.



**Figure 2. Theoretical depiction of how water savings may increase as turfgrass is replaced.**

The daily evapotranspiration and precipitation measurements were collected from the California Irrigation Management Information System (CIMIS) weather station number 75 located in Irvine in Orange County, California. Spatially interpolated or “Spatial ETo” values were collected for additional areas on the basis of zip code. The weather normalization technique used the actual weather corresponding to the date of interest rather than a historic average. For the Orange County area, the results are listed in Table 1.

From the data previously collected from onsite inspections at Turf Removal sites within Orange County, the average removal area is 2,000 square feet (residential and commercial sectors combined). This would result in a reduction in annual use from 112,000 gallons per year prior to the conversion to 28,000 gallons per year post conversion, a savings of 84,000 gallons per year. On a per square foot basis, this is a savings of approximately 42 gallons per year per square foot

<sup>1</sup> Baum-Haley, M. (2013). Evaluation of Potential Best Management Practices- Turf Removal. Prepared for The California Urban Water Conservation Council.

or 0.115 gallons per day (gpd) per square foot. This analysis also concurs with the water savings observed using actual meter data.

**Table 1. Orange County Potential Savings**

Annual Average		Assumptions		Theoretical Irrigation Requirement TIR (gallons per ft <sup>2</sup> per year)		Potential Savings based on TIR	
P (in/yr)	ET <sub>o</sub> (in/yr)	P <sub>e</sub> (in/yr)	IE (%)	Turfgrass Landscape K <sub>c</sub> = 0.8	CA Friendly Plantings K <sub>c</sub> = 0.3	Gallons per ft <sup>2</sup> per year	Percent
12	47	3.8	60-70	56	14	42	75%

Following the theoretical analysis, actual water use at sites was evaluated utilizing historic water use data, as well as the water use data following the turf removal landscape conversion. Metropolitan Water District of Southern California looked at their regional turf removal program and found water savings of approximately 44 gpd per square foot, or 0.121 gpd per square foot. Turf Conversion projects are required switch to low-flow/high efficiency irrigation; it is thought that the results of Metropolitan’s study capture the increased irrigation efficiencies, resulting in a higher savings volume than the theoretical calculation. The Program maximizes water savings through turf conversions by increasing irrigation efficiencies as well as reducing the landscape’s plant material water requirement.

The proposed Program anticipates 1,500,000 square feet (approximately 34 acres) of turfgrass conversions. This would in turn result in over 180,781 gpd or approximately 203 acre-feet saved per year. Turfgrass removal is given a ten-year lifetime for water savings purposes, therefore contributing to approximately 2,025 lifetime acre-feet of water conserved.

One hundred percent of Turf Conversion sites will receive a pre-project and post-project inspection. The pre-project inspection will verify there is currently turf on the proposed site and the square footage of turf eligible for the project. The post-project inspection verifies that the total project area was converted to meet program rule and requirements, such as being 100% permeable and installing low-flow irrigation.

#### *Smart Timers*

MWDOC consistently conducts evaluations at the completion of program terms. As a means to continuously track the long-term success of this type of rebate program, these results are compared. Table 2 summarizes the previous irrigation timer evaluation results.

The primary objective of impact evaluations such as these was to measure the amount of water saved throughout the course of the program. A statistical analysis of the collected data was performed in order to provide insight into the characteristics of sites that participated in the program and determine if a reduction of water use was due to device installation.

Monthly meter read data was requested for each site from the retail water agency. Historical water use was requested for a least three years prior to the intervention point and one year following. The intervention point is designated as the point in time when the device was purchased/installed. Water savings was determined by comparing the gpd water use prior to and following the intervention point. This methodology allowed for direct comparison of water use based on comparable irrigation need and system consistency when utilizing weather normalization (see Table 2). This specifically allows for the ability to compare not just the net water savings for the sample as a whole but, additionally, to pairwise the analysis for each site, resulting in the categorical water use. Additionally, the water use at intervention sites was compared to a control group, exposing all samples to the same confounding factors such as weather, conservation campaigns, etc.

The average residential savings across the four applicable studies listed below is 49.8 gpd per site. The average commercial savings across the four applicable studies is 548 gpd per site or 15.66 gpd per station.

**Table 2. MWDOC Smart Timer Efficiency Research**

Study Title	Author	Sector	GPD Savings	Percent of Total Water Use	Percent of Outdoor Water Use
<b>Residential Runoff Reduction Study, 2004</b>	A&N Technical Services, T. Chesnutt, Ph.D.	Res.	41	10%	-
		Comm.	545		21%
<b>Commercial ET-Based Irrigation Controller Water Savings Study, 2006</b>	A&N Technical Services, T. Chesnutt, Ph.D.	Comm.	601	-	22%
<b>MWDOC SmartTimer Rebate Program Evaluation, 2011</b>	A&N Technical Services, T. Chesnutt, Ph.D.	Res.	49	9%	-
		Comm.	727		28%
<b>OC Smart Irrigation Timer Rebate Program, 2014</b>	M. Baum-Haley, Ph.D.	Res.	59	11%	18%
		Comm.	320	-	10%
<b>CLWUE Rebate Program, 2018</b>	R. Waite	Res.	50	11%	-

Via a rebate program format, the proposed Program will facilitate the installation of approximately 4,500 residential timers and up to 35,000 commercial timer stations which, at a historic average of 35 stations per commercial timer is 1,000 commercial timers, for a combined total of up to 5,500 timers. Only those models with EPA WaterSense labeling will be eligible under the Program guidelines, which will be checked through receipt verification.

Physical inspections will also take place to verify installation. Based on a water savings of 49.8 gpd per residential timer, this will conserve approximately 223,875 gpd or 251 AFY. Commercial timers, based on a water savings rate of 15.66 gpd per station, will save up to 548,250 gpd, or 614 AFY savings. Combined, residential and commercial timers are anticipated to save approximately 865 AFY. Smart timers are given a ten-year lifetime for water savings purposes, therefore contributing to 8,649 lifetime acre-feet of water savings.

#### *Sustainable Water Source Conversion*

Sustainable Water Source Conversions switch potable dedicated irrigation meters to a sustainable alternative source, such as municipally supplied recycled water, rainwater, or stormwater capture, creating 100% potable water savings. Sites are required to adhere to local, state, and federal requirements regarding alternative water sources, such as municipally supplied recycled water, and will be inspected to ensure completion and quality. Based on historic data in Orange County, the average irrigated project size is approximately 95,000 square foot, with an average savings of 8 AFY or 7,142 gpd per site. Water savings for each project are established through each converted meter's historic water usage. Sites will be verified to ensure they have successfully switched to non-potable irrigation. This Program anticipates 12 different project sites converting approximately 24 dedicated irrigation meters to a sustainable source. This will save 85,703 gpd, or 96 AFY. Over the 20-year project life, these conversions will save 600 AF.

#### *Comprehensive Program*

Overall, the installation and conversion of the previously mentioned measures translates to 1,163 AFY saved or 12,594 AF over the project life. This conserved water would otherwise be consumed by inefficient irrigation use. Because of the Program, the conserved water will be left in storage to be used at a later time such as in periods of drought, or left in its natural state such as local groundwater aquifers, the Colorado River, or in the Bay-Delta. Quality control measures are in place to ensure participants correctly convert their landscape or irrigation according to the terms and conditions of the Program. At the close of the Program, a statistical evaluation based on participant consumption history will be conducted. The Program will be in a rebate incentive format, and will be built on a variety of existing water use efficiency programs that MWDOC currently implements, such as the Turf Removal Program, SmartTimer Rebate Program, SoCal WaterSmart Program, and other various landscape programs. These programs are complementary and work collaboratively to achieve maximum water conservation results.

**Table 3. Water Savings per Device**

Measure	GPD Savings	Qty	Unit	Total GPD Savings	AFY Savings	AF Life Savings
Turf Conversion (Res and CII)	0.121/ft <sup>2</sup>	1,500,000	ft <sup>2</sup>	180,781	203	2,025
Smart Timers (Res)	49.8/ timer	4,500	timers	223,875	251	2,508
Smart Timers (CII)	15.66/ station	35,000	stations	548,250	614	6,141
Sustainable Meter Conversions (CII)	7,142/site	12	sites	85,703	96	1,920
<b>Totals</b>				<b>1,038,609</b>	<b>1,163</b>	<b>12,594</b>

Evaluation Criterion B: Water Supply Reliability

*Addressing Water Reliability Concerns*

The Program will address several water reliability concerns including population growth and uncertainties in supply and demand due to climate change. As the population in Orange County steadily increases, water conservation efforts have been reducing the gallons per capita per day (GPCD) water use in Orange County. Water conservation efforts, such as this proposed Program, will help to offset increasing population to curb demand and strengthen water supply reliability to support a growing population. Additionally, as the West deals with climate change, the Program will help the region cope with warming temperatures and more infrequent, but more intense periods of rainfall. By switching to native or CA Friendly plantings, which are more tolerant of warm, dry climates, even less water will be needed for irrigation during times of peak heat or dryness. As intensities of storms increase, the stormwater capture features that are included in every turf conversion project will help to infiltrate stormwater into the ground, increasing the water efficiency of the project site, increasing groundwater, and reducing polluted stormwater runoff.

The Program will help to provide reliable water supply, reduce dependency on imported water, meet water demands during all hydrologic conditions (drought resiliency), and maximize potable/recycled water use efficiency. As a result, less water will be pumped from the groundwater basin, aiding in refilling the basin more rapidly, and less imported water will be used, allowing unused water to be retained in regional water storage reservoirs for use at a future date. Additionally, water will also remain in-stream for environmental benefit. Statewide benefits include off-sets to Bay-Delta and Colorado River Aqueduct (CRA) pumping, and local benefits include off-sets to local sources such as groundwater and surface water. These water conservation efforts will preserve local flexibility and implement water use management improvements at local and regional levels to maximize beneficial use of existing water supplies.

The Program will result in 1,163 AFY water savings, which means 1,163 AF of water will avoid diversions each year from the Delta and CRA, or be kept in local storage (groundwater, surface water) for use at a future date. Due to the arid climate and hot summers in southern California, the greatest savings will be achieved in the summer months through irrigation efficiency. Since supplies from the CRA and State Water Project are considered an important MWDOC supply source, we assume that saved water could stay in-stream, resulting in increased in-stream flows. The Program's largest and most important impact on the Bay-Delta and CRA will be reducing dependency and the amount of water received by Orange County from the Bay-Delta through the State Water Project and the CRA.

#### *Multiple Benefits to Multiple Users*

**Sectors receiving benefit:** The Program will benefit residential property owners/inhabitants, commercial businesses, public agencies, and any other landowner who irrigates landscapes in Orange County. This includes public parks, which hold even greater benefits to the public.

**Benefits to endangered/threatened species:** This proposed Program will benefit several federally-listed threatened and endangered species in the San Francisco Bay and San Joaquin Delta ecosystem. These species include the Delta Smelt, Steelhead Trout, and Spring and Winter-Run Chinook Salmon. The relationship of these species to a Reclamation Program centers on the federal Central Valley Program in California and the impacts the Central Valley Program and State Water Program have on the San Francisco Bay and San Joaquin Delta ecosystem. Due to the listing of these species and recent court rulings, southern California's ability to access imported water from the Bay/Delta has already been restricted. This court action is designed to retain water in the ecosystem for the benefit of and to accelerate the recovery of these listed species. The proposed Program is designed to aid Orange County in reducing its dependence on imported water from the Bay/Delta watershed.

Locally, the proposed Program will benefit the recovery of listed Steelhead Trout in the Aliso and San Juan Creeks and the Santa Ana River by reducing urban runoff and non-point source pollution through better irrigation management. This linkage has been confirmed through MWDOC's Residential Runoff Reduction Study. Additionally, the promotion and installation of CA Native landscapes help to create habitat that supports endangered species such as the California Gnatcatcher and numerous species of endangered butterflies including the Callippe Silverspot Butterfly and the San Bruno Elfin Butterfly.

**Larger initiative to address water reliability:** The Program will benefit larger initiatives to address water reliability, including the California's Governor's initiative to make Conservation a California Way of Life. This includes California legislature AB 1168 and SB 606, which create water use objectives for urban water suppliers based on population, irrigated area, ETo, and other factors. Increasing irrigation efficiencies, which will lower water use in Orange County, through this grant opportunity will directly support this effort.



The Program is also consistent with Integrated Regional Water Management (IRWM) in California, including the 2018 IRWM South Orange County Plan (managed by Orange County Public Works), the 2018 One Water One Watershed (OWOW) Plan (managed by the Santa Ana Watershed Project Authority), and the 2018 Orange County Plan for North and Central Orange County (managed by Orange County Public Works). These plans seek to directly address water supply reliability concerns in the region and set forth several goals/strategies to improve water supply reliability, many of which this Program directly meets. Strategies and goals that are met by this proposal include: Increase the use of non-potable water; capture and reuse of dry weather and stormwater runoff, Reduce consumption from outdoor residential, commercial, industrial, and institutional landscapes; Promote use/retrofitting of irrigation system distribution uniformity improvements; Promote the use/retrofitting of low-volume irrigation technologies in urban landscapes; Promote use of native and non-native California Friendly plants in urban landscapes; Promote the replacement of non-functional turf grass with California Friendly plantings; Promote the use/retrofitting of smart timers in urban landscapes; Benefit air, climate, and energy resources with consideration for reducing GHG emissions, carbon sequestration, and/or increased renewable energy; Encourage healthy soils.

**Benefits to Indian Tribes:** This Program has no direct benefit to Indian Tribes as no federally recognized Tribal Land exists in Orange County.

**Benefits to economically disadvantaged communities:** This Program will benefit economically disadvantaged communities by providing monetary assistance, in the form of a rebate, for water savings projects to help increase the financial feasibility of implementing such measures. This program, as well as MWDOC's other programs, is marketed through our outreach efforts to disadvantage communities. Many of these projects, such as MWDOC's turf conversions and free landscape design assistance programs, can beautify landscapes and help mitigate the urban heat island effect by increasing biomass while simultaneously using less water, requiring less maintenance and reducing the cost of a monthly water bill.

#### *Promoting Collaboration to increase Water Supply Reliability*

**Widespread support for and significance of the project:** The proposed Program promotes and encourages collaboration among all water agencies in Orange County, which helps to increase the reliability of the regional water supply. While MWDOC serves approximately 70% of the county, the proposed Program will be implemented throughout the county in partnership with all retail water agencies. Widespread support for this Program is demonstrated by the 18 letters of support from Orange County retailers, the Surfrider Foundation the County of Orange, Santa Ana Watershed Project Authority, Metropolitan Water District of Southern California, California State Senators and Assemblymembers, and US Representatives starting on page 43. This partnership is significant as water agencies in the county will have a united message of promoting efficient landscape water use to water users. Because of this county-wide approach, all consumers will have access to one standardized program. Additionally, local

environmental organizations such as Surfrider Foundation and Orange County Coast Keeper, provided key stakeholder contribution in the development of the MWDOC Water Use Efficiency Master Plan from which this Program is derived. The Program will significantly increase the awareness of water conservation in Orange County. The Program will be promoted through water bill stuffers (bill inserts), water bill messages, newsletters, websites, and social media channels. The collaboration and support among MWDOC, Orange County retail agencies, Metropolitan Water District of Southern California, the County of Orange, the Santa Ana Watershed Project Authority, non-profit organizations and environmental groups like Surfrider Foundation, State legislatures, US Representatives, and the Bureau of Reclamation is extremely important and significant because the whole of all efforts to increase water supply reliability in the region is greater than the sum of its individual parts.

**Enhanced future conservation:** The Program will serve as an example of efficiency that can be replicated, not only from user to user, but also by water agency to water agency, thereby increasing the capability of future water conservation and efficiency efforts beyond Orange County. By promoting the conversion of dedicated irrigation meters to a sustainable source, such as municipally supplied recycled water, the recycled water grid will expand, providing more opportunities for future conversions, which help diversify Orange County's water supply portfolio. A significant portion of customers who participate in MWDOC's water savings rebate programs will participate in other in the programs in the future. Metropolitan Water District of Southern California has demonstrated that turf conversions sites induce a multiplier effect, meaning people not participating in the rebate program will convert their lawns themselves, enhancing the opportunities for future water efficiency and conservation. The measures and devices installed/converted in this Program create long term water efficient practices, which will save water during and between times of drought, and also provide infrastructure for Orange County residents to further conserve water during times of drought. The Program also provides specific tools to help sites reduce their water use, eliminate runoff, and utilize stormwater.

**Prevention of water-related conflict:** Reducing Orange County demand will lessen the stress on the complex water system in California and Colorado River Basin. Through conservation, the Program will lessen demand on imported water systems, such as the SWP and CRA, which are used to provide water to southern California. Additionally, this Program is consistent with IRWM planning and promotes cohesive water planning strategies throughout the State of California.

Evaluation Criterion C: Implementing Hydropower

This project will not implement Hydropower.

Evaluation Criterion D: Complementing On-Farm Irrigation Improvements

This Program will not be completing On-Farm Irrigation Improvements.

## Evaluation Criterion E: Department of the Interior and Bureau of Reclamation Priorities

### *Department Priorities*

**Creating a conservation stewardship legacy second only to Teddy Roosevelt:** MWDOC is a leader in California water conservation. Efforts in Orange County have been key in stabilizing water demand, evaluating planning needs, keeping up with a growing population, and providing public water saving programs. MWDOC sees water conservation as a way of life, and provides programs and education to help spread this vision to Orange County residents. This Program provides feasible opportunities to assist residents in saving water, along with resources and information to simultaneously increase landscape aesthetics and decrease water consumption. The work completed through this Program will serve as an example for others to follow, further promoting water conservation and sustainable landscaping. Along with providing financial incentives and assistance for customers to transform and upgrade their homes or businesses to water efficient, runoff retentive landscapes, MWDOC provides and shares all water conservation data, research, and resources with the public and other water agencies at the local, regional, state, and federal levels. MWDOC has worked with the Department of Interior, specifically the Bureau of Reclamation, in numerous prior water conservation projects that have saved thousands of acre feet of water. Together, MWDOC and the Bureau of Reclamation will continue to create a water conservation legacy of which Teddy Roosevelt would be proud.

**Utilizing our natural resources:** This Program promotes the sustainable utilization of natural resources. Through water conservation, energy is also conserved by reducing the amount of water pumped to southern California through the State Water Project and the Colorado River Aqueduct. For each acre foot of water saved, an energy cost of 3,000 kWh of energy is avoided. This Program will save 1,163 AFY of water, which will reduce energy consumption by 3,522,391 KWh per year. Additionally, landscape conversion projects will be incorporated with a Watershed Approach design, which means elements to retain and utilize rainwater are mandatory on the project site. Watershed Approach elements will utilize rainwater as a natural resource through retention and infiltration and include, but are not limited to, rain gardens, bioswales, and infiltration strips. This approach also promotes healthy, living soil, which promotes bioactivity, a natural benefit to soil and landscape health. Landscape conversions will increase urban biomass by approximately 55,769 pounds, which will utilize plant mass as a natural resource to help reduce urban heat island effects, also reducing energy use by cooling homes. Increases in biomass also function as a natural carbon sink and will sequester an estimated 27,884 pounds of carbon from the atmosphere.

**Restoring trust with local communities:** By providing Reclamation funds to the public through rebate incentive programs, MWDOC communicates the importance of conserving water while showing that Reclamation and MWDOC are providing the resources to help residents achieve the water savings goals that have been requested of them. The act of engaging the public in water efficiency programs and providing monetary assistance can help solidify trust between the community and the local and federal government.

**Striking a regulatory balance:** This Program will assist residents in Orange County in saving water, at meet restrictions set forth by state or local governments in times of drought. This allows MWDOC and the Family of Orange County Water Agencies to provide monetary incentives for performing water savings actions, instead of fining residents for water waste or increasing water rates based on consumption. With this approach, the goal of saving water is met through means other than issuing fines and citations, and the public gains benefits in addition to water savings, such as new fixtures, aesthetically pleasing landscapes, and an increase in urban biomass, which helps to mitigate urban heat island effects.

#### *Reclamation Priorities*

##### **Increase water supplies, storage, and reliability:**

**Leverage science and technology to improve water supply reliability:** This Program incentivizes the use of best available technology to improve irrigation efficiencies. This includes the use of newly released smart irrigation timers that are installed with “smart” valves that connect to applications on users’ smart phones. If the valve detects that water has been running beyond scheduled times, a potential leak is detected, the user is alerted through their smart phone application, and the user may shut the valve to prevent water loss. This type of technology increases the volume of water conserved, therefore further increasing water supply reliability.

**Address ongoing drought:** This Program lowers water consumption to leave more water in storage to prepare supplies for times of drought and also directly supports Orange County water users in better managing their water use during times of drought. By installing drought tolerant plant material and high efficiency irrigation, irrigators will increase their water efficiencies and, also very importantly, be better prepared to conserve even more water during times of drought. This means that if drought restrictions are put in place, participants of this Program will be more capable to meeting them and be able to conserve more water than they otherwise would. Additionally, dedicated irrigation meters that are converted to use non-potable supplies are able to conserve 100% of potable water during times or drought or otherwise.

#### *Evaluation Criterion F: Implementation and Results*

##### *Subcriterion F.1: Project Planning*

This Program was identified in MWDOC’s 2013 Water Use Efficiency Master Plan as a high priority implementation program. Program design work is complete and includes a standard consumer rebate implementation framework. All aspects of program implementation are operational with the rebate process, device identification, and marketing ready to implement. The proposed Program is included in the 5-year portfolio of programs identified for implementation in the Master Plan. An updated MWDOC Water Use Efficiency Master Plan is paused pending regulations to be set by the State of California; however, it is slated to directly

support water use efficiency/conservation programs such as the Orange County Sustainable Landscapes Program.

Countywide planning has been done to support the proposed Program. Water use efficiency programs, such as the Program described in this proposal, are included in local Integrated Regional Watershed Management Plans (IRWMP) as a multi-benefit program. Benefits include water conservation, stormwater and dry-weather runoff reduction, non-point source pollution prevention, and greenhouse gas reductions. Comprehensive landscape irrigation water use efficiency programs and smart irrigation timer programs have been consistently ranked in the top five (5) programs against dozens of other water supply, water reliability, and watershed management programs in these IRWMP efforts.

The Program is consistent with the water use efficiency and watershed management goals contained in the California Water Plan, TMDLs, CALFED Bay-Delta objectives, AB 32, local land use planning, and conforms to California's Water Resilience Portfolio and legislature SB 606 and AB1668, which require urban water suppliers to meet water use objective budgets based on population, landscape area, ETo, and other factors. Increasing irrigation efficiencies through this Program will directly support Orange County in meeting water use objectives. Additionally, this Program is consistent with MWDOC's 2015 Urban Water Management Plan and our commitment to implement the BMPs as a signatory to the Memorandum of Understanding for urban water conservation. Lastly, the Program is consistent with Metropolitan's Integrated Resources Plan, which contains a water use efficiency goal of 1.9 million acre-feet reduction by 2020. MWDOC is currently working on its 2020 Urban Water Management Plan; similarly, Metropolitan is currently working on the 2020 Integrated Resources Plan. Overall, this Program represents a key strategy, landscape water use efficiency, which will assist Orange County water agencies to meet and maintain their reduction goals.

#### *Subcriterion F.2: Performance Measures*

At the Program's conclusion, MWDOC plans to conduct a robust statistical water savings analysis using regression analysis. This will give the water industry another opportunity to quantify actual water savings associated with this Program. This analysis will include a statistically significant population of Program Participants and will maintain 95% confidence. Participant water use data before and after participating in the Program will be used to determine changes in water use associated with the landscape improvements and device installation. The estimated historical average water use will be determined through site past meter data and will be utilized to quantify water application savings, with considerations for weather. The monthly meter data will be provided by the retail water agency. Historical water use will be requested for at least three (3) years and up to five (5) years prior to the intervention point. Implementation-phase water use will be requested following the intervention point, which is the point in time when the measure was implemented. Water savings will be determined by comparing the gallons per day water use prior to and following the intervention point.

A written report describing the statistical methods used and evaluation results will be submitted with the final report for the Program. The evaluation will quantify the total estimated irrigated area that has been converted and/or the improved irrigation devices (confirmed through installation verification and site inspections) with associated water savings. Where applicable, using established water savings metrics, the assumed water savings will be quantified by using the metric and number of devices/square foot and compared to savings numbers achieved through statistical analysis.

#### *Subcriterion F.3: Readiness to Proceed*

The following tasks and milestones are included in the proposed Program. Figure 3 represents these tasks and their associated schedule for the 36-month term of the grant. The schedule is shown to start in October 2021; however, the project is shovel ready and is capable of starting sooner should an agreement between Reclamation and MWDOC be signed at an earlier date. Should the Program start sooner, all dates would be moved up accordingly; the total project period will not extend past three years from the start date.

#### **Task 1 – Project Administration**

Project administration includes staff hours needed to perform day to day operations of the Program and also includes hours spent towards other tasks, including project reporting and the project evaluation. Project Administration will begin once the Program is able to start, and will continue until the Final Report is submitted to Reclamation.

#### **Task 2 – Marketing/Promotions**

Program marketing will include the design and production of marketing and promotional material that will be distributed to inform the public about the Program. Program Marketing will begin when the Program starts and continue throughout the majority of the three-year Program period, ending before the last quarter of the term.

#### **Task 3 – Inspections**

Program inspections are implemented as quality control measure to ensure that any participant receiving rebate incentives has met all Program requirements. Inspections will take place as soon as applicants apply for Task 4 Rebate Incentives, which is estimated to being the second month into the Program Term and will extend until approximately halfway into the last quarter of the three-year term.

#### **Task 4 – Rebate Incentives**

Rebate Incentives include turf conversions, the installation of EPA WaterSense labeled Smart Irrigation Timers, and landscape meter conversions to utilize a sustainable source (such as municipally supplied recycled water). Rebate incentive applications are expected to start the second month into the program term and to continue throughout the three-year program term, ending in the last quarter of the term.

**Task 5 – Project Reporting**

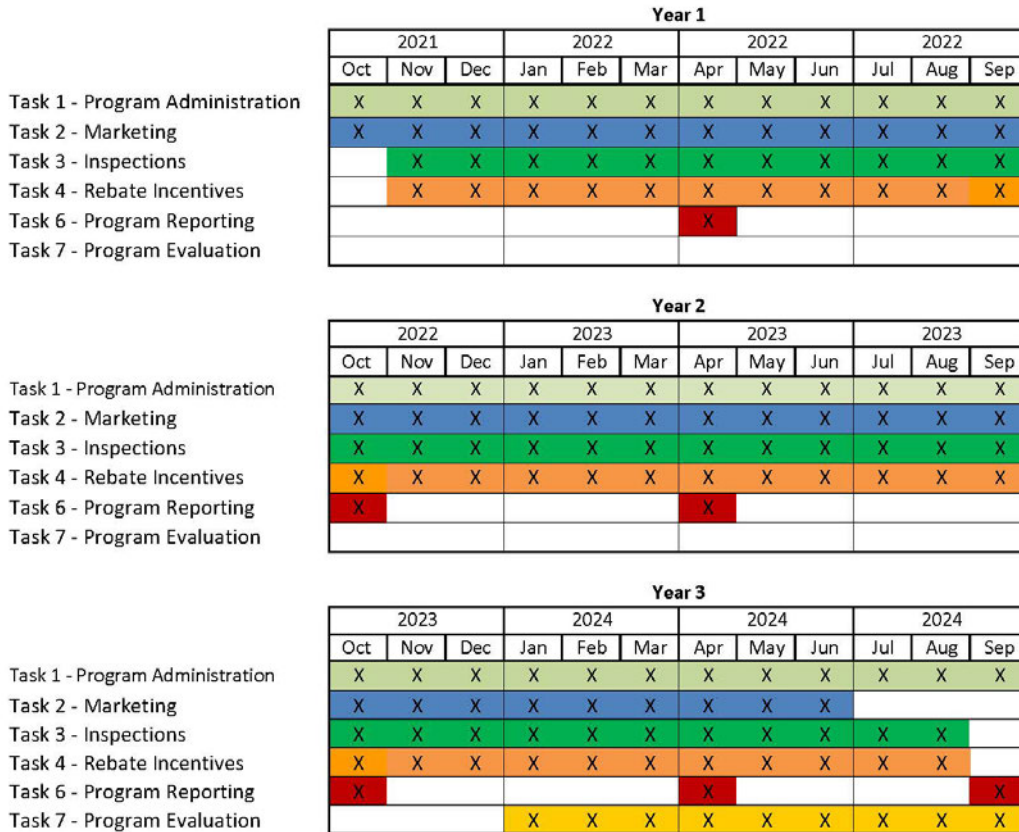
Project reporting includes the submittal of semi-annual and final reports and all required SF forms, written Program progress narratives, tabular data tables, and all other required backup to support reimbursement as dictated by Reclamation. This is estimated to take place every six months, but will be adjusted as necessary based on the schedule included in the final agreement.

**Task 6 – Project Evaluation**

The Project Evaluation will include the Program process and statistical water savings impact evaluation to quantify program benefits, most specifically actual water savings. This is estimated to start in the 10<sup>th</sup> quarter of the three-year term and be completed with the Evaluation submitted in the final report.

MWDOC is not aware of any required permits or approvals to implement the proposed Program. Program Participants, however, may be required to obtain a plumbing permit from their local city if modifications to the irrigation system point of connection are made as a result of participation. Because the Program will primarily focus on irrigation control components downstream of the point of connection, the need for a plumbing permit will be rare. Customers may also be or may be required to obtain City, Homeowner Association, or other approvals and are required to obtain any required permits or approvals before applying for a MWDOC program and are required to conform to any City ordinance. The rebate program participant agreement that is required to participate contains language placing the permit requirements on the Participant, should a permit be required.

There is no engineering or design work performed for this project. There are no new policies or administrative actions required to implement the project.



**Figure 3. Program schedule and milestones by task.**

**Evaluation Criterion G: Nexus to Reclamation Project Activities**

The proposed Program is connected to Reclamation Project activities through its water supplies. MWDOC obtains its imported water supplies from the Metropolitan Water District of Southern California via the Colorado River Aqueduct (CRA) and State Water Project (SWP). Metropolitan accesses Colorado River water via an entitlement, and obtains State Water Project water from Northern California. This state system is operated in parallel with Reclamation’s Central Valley Program. Through water conservation, MWDOC reduces the amount of water imported to Orange County through the SWP and CRA, reducing stress on the Bay Delta and Colorado River. Additionally, the Program will be implemented throughout Orange County, including the Irvine Ranch and Orange County Water District service areas. These agencies have Title 16 contracts with Reclamation.

The proposed Program will not be implemented on Reclamation lands or facilities to our knowledge. However, the Program will be implemented within the Lower Colorado Region and, more specifically, within the Southern California Area Office activity area. The Program will curb water demand, therefore allowing more water to remain in storage.



This Program will not directly benefit any Indigenous Tribes as there is no federally recognized tribal land in the MWDOC service area.

Evaluation Criterion H: Additional Non-Federal Funding

The total project cost is \$6,873,447.42. Of this the non-federal funding will total \$4,873,447.42, 71% of total costs. This exceeds 50% of the project costs. See Table 5. Funding Sources for detailed information.

$$\frac{\$4,873,447.42}{\$6,873,447.42} \times 100 = 71\%$$

## Project Budget

### Funding Plan and Letters of Commitment

The non-Reclamation funding amount assigned to this Program is \$4,873,447.42. MWDOC will contribute all necessary non-Reclamation funding for the Program. No other source of funding is required. MWDOC's funding is sourced from budgeted funds for Salaries and Wages and funding allocated from MWDOC's Water Use Efficiency programmatic funds for Rebate Programs. A letter of funding commitment signed by the MWDOC General Manager is attached, see page 26

#### **Non-Federal Entity: Municipal Water District of Orange County (MWDOC)**

The funding amount MWDOC will provide is \$4,873,447.42, or 71% of the overall Program's cost. This amount is made up of both in-kind contributions in the form of salaries and benefits (\$193,597.42), program marketing (\$1,250.00), and direct payments to Program participants as incentive funding (\$4,678,600.00) provided during the course of the Program, see Table 4.

The in-kind contribution MWDOC will provide, totaling \$193,597.42, is a combination of both salaries and fringe benefits. It is proposed MWDOC will commit 4,563 hours over the three-year term of the Program. This averages to approximately 29.25 hours per week and will be spread across six (6) of MWDOC's water use efficiency staff. Table 7 details the breakdown by staff member and their corresponding salary/benefit unit rate, the total three-year term hours, and the associated cost. To promote the Program, MWDOC will spend \$1,250.00 on marketing efforts, which will include bill inserts, social media campaigns, and other advertising strategies. MWDOC will contribute \$4,678,600.00 in direct payments to Program Participants, in the form of rebate incentives. Program rebate incentives paid to Participants will total \$6,528,600.00.

**Table 4. Summary of Non-Federal and Federal Funding Sources**

<b>FUNDING SOURCES</b>	<b>AMOUNT</b>
<b>Non Federal Entities</b>	
1. Municipal Water District of Orange County Direct Contribution	\$4,679,850.00
2. Municipal Water District of Orange County In-kind Staff Time*	\$193,597.42
Non-Federal Subtotal	<b>\$4,873,447.42</b>
<b>Other Federal Entities</b>	
1. None	\$0.00
Other Federal Subtotal	\$0.00
<b>REQUESTED RECLAMATION FUNDING</b>	<b>\$2,000,000.00</b>

The federal funding requested by Reclamation for staff time, rebate incentives, and quality control inspections totals \$2,000,000.00. Of the Program total staff time costs, \$213,597.42, MWDOC is requesting \$20,000.00 to be funded by Reclamation; for quality control inspections MWDOC is requesting \$130,000.00; of the total rebate incentives \$6,528,600.00, MWDOC is requesting \$1,850,000.00 from Reclamation.

Table 5, below, lists the total Program costs broken down by source and percent of total cost.

**Table 5. Funding Sources**

<b>Funding Sources</b>	<b>Percent of Total Program Cost</b>	<b>Total Cost by Source</b>
Recipient Funding	71%	\$4,873,447.42
Reclamation Funding:	29%	\$2,000,000.00
Other Funding	0%	\$0.00
<b>Totals</b>	<b>100%</b>	<b>\$6,873,447.42</b>

**Additional information:** No other funding source will be required; there is no needed external funding; a Letter of Commitment from MWDOC is included.

MWDOC does not expect costs, including in-kind costs, incurred before the Program start date.

No other Federal partners will be providing funding to this Program.

This expenditure benefits the project by allowing the Program to reach a greater amount of Orange County water users, including the hardest to reach and/or incentivize. This funding will help incentivize participants who otherwise would not complete a landscape water savings action (such as Turf conversions). By increasing participation in water savings activities, this funding will increase water saved in Orange County due to landscape improvements, therefore increasing water supply reliability in the region.



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- Emerald Bay Service District
- City of Fountain Valley
- City of Garden Grove
- Golden State Water Co.
- City of Huntington Beach
- Irvine Ranch Water District
- Laguna Beach County Water District
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- City of San Juan Capistrano
- Santa Margarita Water District
- City of Seal Beach
- Serrano Water District
- South Coast Water District
- Trabuco Canyon Water District
- City of Tustin
- City of Westminster
- Yorba Linda Water District

September 11, 2020

Bureau of Reclamation  
Financial Assistance Operations  
Attn: Mr. Ned Weakland  
P.O. Box 25007, MS 84-27815  
Denver, CO 80225

Re: Municipal Water District of Orange County's WaterSMART Water and Energy Efficiency Grant Application

Dear Mr. Weakland:

The Municipal Water District of Orange County (MWDOC) has submitted a grant proposal for the Bureau of Reclamation's 2021 WaterSMART Water and Energy Efficiency Grant Funding Opportunity, FOA No. BOR-DO-21-F001. MWDOC's proposed project is titled the "Orange County Sustainable Landscapes Program," and will result in water savings and runoff reduction, yielding improved water supply reliability and a reduction on the reliance of imported water in the project area. The project will provide incentive funding to promote irrigation retrofits and landscape transformations for residential and commercial customers throughout Orange County.

The purpose of this letter is to provide assurances that MWDOC has the ability to and will provide the proposed cost share \$4,873,447.42 for implementation of the program.

Should you need additional information, please contact Joe Berg at (714) 593-5008.

Sincerely,



General Manager

### Budget Proposal

The Total Project Cost equals \$6,873,447.42. Costs requested to be reimbursed with Federal funding totals \$2,000,000.00; costs to be paid by the applicant totals \$4,873,447.42. There are no third-party contributions for this project. See Table 6 for the breakdown of total project costs.

**Table 6. Total Project Cost Table**

<b>SOURCE</b>	<b>AMOUNT</b>
Costs to be reimbursed with the requested Federal funding	\$2,000,000.00
Costs to be paid by the applicant	\$4,873,447.42
Value of third-party contributions	\$0.00
<b>TOTAL PROJECT COST</b>	<b>\$6,873,447.42</b>

Table 7 outlines the budget proposal and breaks down budget items by MWDOC's assigned tasks and their corresponding federal category.

**Table 7. Budget Proposal**

BUDGET ITEM DESCRIPTION	COMPUTATION		Quantity Type	TOTAL COST
	\$/Unit	Quantity		
<b>1. Salaries and Wages (Task 1)</b>				
Program Administrator ( )		39	hours	
Program Manager ( )		780	hours	
Program Support ( )		624	hours	
Program Support ( )		624	hours	
Program Support ( )		936	hours	
Program Support (Intern)		1,560	hours	
<b>2. Fringe Benefits (Task 1)</b>				
Program Administrator		39	hours	
Program Manager		780	hours	
Program Support ( )		624	hours	
Program Support ( )		624	hours	
Program Support ( )		936	hours	
Program Support (Intern)		1,560	hours	
<b>3. Travel</b>				
Does not apply to this program				\$0.00
<b>4. Equipment</b>				
Does not apply to this program				\$0.00
<b>5. Supplies and Materials</b>				
Marketing and Promotional materials (Task 2)	\$0.025/ insert	50,000	inserts	\$1,250.00
<b>6. Contractual/Construction</b>				
Quality Control Inspections (Task 3)	\$110/insp.	1,182	inspections	\$130,000
Rebate – Turf Removal (Task 4)	\$3/ ft <sup>2</sup>	\$1,500,000	ft <sup>2</sup>	\$4,500,000.00
Rebate – Smart Timers CII (Task 4)	\$45/station	35,000	stations	\$1,575,000.00
Rebate – Smart Timers Residential (Task 4)	\$80/timer	4,500	timers	\$360,000.00
Rebate – Sustainable Water Source Conversion (Task 4)	\$975/AFY saved	96 AFY (12 sites; 8 AFY/site)	AFY	\$93,600.00
<b>7. Environmental and Regulatory Compliance Costs</b>				
Does not apply to this Program.				\$0.00
<b>8. Other</b>				
Program Reporting (Task 5)	Costs included in Task 1 (Admin)			\$0.00
Program Evaluation (Task 6)	Costs included in Task 1 (Admin)			\$0.00
<b>TOTAL DIRECT COSTS</b>				<b>\$6,873,447.42</b>
<b>Indirect Costs</b>				
Does not apply to this Program				\$0.00
<b>TOTAL ESTIMATED PROJECT COSTS</b>				<b>\$6,873,447.42</b>

**Budget Narrative**

The Project will be funded through a combination of federal and non-federal funds, including In-Kind services and Direct Funding provided by the Municipal Water District of Orange County (MWDOC). The tasks below are listed as they are detailed in the Budget Proposal Worksheet. The items that pertain to this Project are listed below by task number.

- Task 1 – Project Administration is in the Salaries/Wages and Fringe Benefits category.
- Task 2 – Marketing/Promotions is considered as Supplies.
- Task 3 – Inspections is considered as Contractual.
- Task 4 – Rebate Incentive is considered as Contractual.
- Task 5 – Project Reporting considered as Other.
- Task 6 – Project Evaluation considered as Other.

Those items requested to be commented on, but not applicable to this Project, are Travel, Equipment, Environmental and Regulatory Compliance, and Indirect Costs.

Table 8, below, distinguishes the Reclamation and applicant contributions detailed in Table 7.

**Table 8. Budget by task and funding source**

Task No.	Task Name	MWDOC Project Funds	Reclamation Project Funds	Total Project Budget
1	Admin	\$193,597.42	\$20,000.00	\$213,597.42
2	Marketing*	\$1,250.00	\$0.00	\$1,250.00
3	Inspections*	\$0.00	\$130,000.00	\$130,000.00
4	Device Rebates*	\$4,678,600.00	\$1,850,000.00	\$6,528,600.00
5	Project Reporting*	\$0.00	\$0.00	\$0.00
6	Project Evaluation*	\$0.00	\$0.00	\$0.00
<b>Total</b>		<b>\$4,873,447.42</b>	<b>\$2,000,000.00</b>	<b>\$6,873,447.42</b>

\*Staffing costs will be incurred, cost included in Program Admin (Task 1)

(1 & 2) Salaries/Wages and Fringe Benefits

**Task 1 – Project Administration**

**Staff Funding - Reclamation \$20,000.00; Recipient \$193,597.42; Total \$213,597.42**

Task 1 constitutes the salaries/wages and fringe benefits associated with the comprehensive Project administration. In order to properly manage the proposed Project, MWDOC will provide, in total, approximately 29.25 hours per week across six (6) MWDOC Staff from the direct cost category, with an average (weighted) rate of \$46.81/hr for salaries/wages and fringe benefits combined. Across the three-year term of the Project, this equates to 4,563 hours, or a total of \$213,597.42 for both salaries/wages and fringe benefits (S&B). These hours include estimated hours that will be spent on Program reporting and the final project evaluation.

Based on an average hourly salary/wage rate across all Staff members of \$38.18 for salaries across 4,563 total Project hours, the total calculates out to \$174,224.31 (salaries/wages). For fringe benefits, the average hourly rate is \$8.63 and totals \$39,373.11 (fringe benefits).

Together the salaries and benefits total \$213,597.42, of which MWDOC will provide \$193,597.42, with a request of \$20,000.00 from Reclamation. Table 9 lists each proposed

MWDOC staff member, their salaries and, separately, their benefits, the 36-month proposed hours, and the salary and benefit totals.

**Table 9. Staff Title, Salary, and Benefits**

MWDOC Staff Personnel	Hours (hr/36-mth)	Salary Rate <sup>[1]</sup> (\$/hr)	Benefit Rate <sup>[2]</sup> (\$/hr)	Salary (\$/36-mth)	Benefit (\$/36-mth)	Salary & Benefits (\$/36-mth)
Project Administrator ██████████	39	██████████	██████████	██████████	██████████	██████████
Project Manager ██████████	780	██████████	██████████	██████████	██████████	██████████
Project Support (██████████)	624	██████████	██████████	██████████	██████████	██████████
Project Support ██████████	624	██████████	██████████	██████████	██████████	██████████
Project Support ████████████████████	936	██████████	██████████	██████████	██████████	██████████
Project Staff (Intern)	4,563	██████████	██████████	██████████	██████████	██████████
<b>Total</b>	<b>4,563</b>	<b>\$38.18</b>	<b>\$8.63</b>	<b>\$174,224.31</b>	<b>\$39,373.11</b>	<b>\$213,597.42</b>
		(Wavg)	(Wavg)			

<sup>[1]</sup> As of July 2020.

<sup>[2]</sup> Fringe Benefits are comprised of State Unemployment Tax (5.25%), CA State Disability Insurance (1.15%), Dental Coverage (variable), District Paid Life Insurance (.52%), Medicare (1.43%), Pers EE (7%), Pers ER (8.98%), Survivor ER Total (.03%), Vision Coverage (variable), Medicare Total (variable), Disability Total (.52%). Fringe benefit rates are for billing purposes.

While each staff member will bring their own experience to the Project, collectively the MWDOC team has over 60 years of experience managing similar water use efficiency projects. ██████████ as the MWDOC Director of Water Use Efficiency (WUE), will be responsible for reviewing quarterly reports and purchase requisitions prior to submittal and providing the overall guidance for the Project, designating an estimated 39 hours to this Project.

██████████, the Water Use Efficiency Supervisor, will act as Project Manager, overseeing the management operations of the Project, handling all financial aspects for the Project; and reviewing all written reports. ██████████, the MWDOC WUE Programs Supervisor, will contribute an estimated 780 hours over 36-months to oversee implementation of the Project.

██████████, Water Use Efficiency Analyst II, will provide technical assistance and, due to her experience with program process and impact evaluations, will also oversee the Project evaluation, the statistical analysis for program benefits and water savings, and provide support with Project administration, contributing 624 hours.



██████████, Senior Water Use Efficiency Analyst, will provide comprehensive program support by overseeing program operations under ██████████ facilitating interaction among MWDOC and Program stakeholders, and assuring day-to-day responsibilities are run smoothly. Ms. Fahl will contribute an estimated 624 hours to this Project over 36-months.

██████████, Water Use Efficiency Analyst II, will work closely with a department intern in carrying out Project day-to-day responsibilities. To administer this Project ██████████ will spend 936 hours, and an intern will spend an additional 4,563 hours over the 36-month period. Under the supervision of ██████████ they will facilitate the daily operations of the Project, along with preparation of the written reports and management of the Project database.

Salary increases for the Project staff would occur at the beginning of each fiscal year (July to June) and have averaged 3.6% over the last five years for merit. It is anticipated over the term of this Project agreement this average will remain. As part of the Project reporting, MWDOC will supply a data table with the actual hours per reporting period and related salary and fringe benefit rates for each staff personnel as certified accurate by MWDOC's Accounting Manager, ██████████

Please see the following pages (32-33) for certified MWDOC staff salary and benefits.



Street Address:  
18700 Ward Street  
Fountain Valley, California 92708

Mailing Address:  
P.O. Box 20895  
Fountain Valley, CA 92728-0895

(714) 963-3058  
Fax: (714) 964-9389  
[www.mwdoc.com](http://www.mwdoc.com)

Sat Tamaribuchi  
President

Joan C. Finnegan  
Vice President

Division I  
Vacant

Larry D. Dick  
Director

Bob McVicker, P.E., D.WRE  
Director

Megan Yoo Schneider, P.E.  
Director

Jeffery M. Thomas  
Director

Robert J. Hunter  
General Manager

**MEMBER AGENCIES**

- City of Brea
- City of Buena Park
- East Orange County Water District
- El Toro Water District
- Emerald Bay Service District
- City of Fountain Valley
- City of Garden Grove
- Golden State Water Co.
- City of Huntington Beach
- Irvine Ranch Water District
- Laguna Beach County Water District
- City of La Habra
- City of La Palma
- Mesa Water District
- Moulton Niguel Water District
- City of Newport Beach
- City of Orange
- Orange County Water District
- City of San Clemente
- City of San Juan Capistrano
- Santa Margarita Water District
- City of Seal Beach
- Serrano Water District
- South Coast Water District
- Trabuco Canyon Water District
- City of Tustin
- City of Westminster
- Yorba Linda Water District

September 11, 2020

Bureau of Reclamation  
Financial Assistance Operations  
Attn: Mr. Ned Weakland  
P.O. Box 25007, MS 84-27815  
Denver, CO 80225

Re: Municipal Water District of Orange County's 2021 WaterSMART Water and Energy Efficiency Grant Application

Dear Mr. Weakland:

As the Accounting Manager/Treasurer for the Municipal Water District of Orange County (MWD OC), I certify that the rates provided on the attached Salary and Benefits Rates sheet are actual salaries currently paid to the listed employees.

Should you need additional information, please contact [REDACTED]

Sincerely,

[REDACTED]

Accounting Manager/Treasurer

**Municipal Water District of Orange County  
Salary and Benefits Rates**

Name	Weekly Staffing for OC Landscape Sustainability Program		3 year program (weeks)		156	
	Weekly Hours	Amount	Hourly Rate	S & B	Total Hours	Total S&B
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

<u>Totals</u>			
hours	4,563.00	over 36 months	Average Salary \$38.18
payroll \$	213,596.76	over 36 months	Average Benefit \$8.63
			<b>\$46.81</b>

I have reviewed this document and certify the salary and fringe benefit rates to be true.

[REDACTED]

Accounting Manager, Municipal Water District of Orange County

Date

### (3) Travel

There are no travel costs, such as mileage, airfare, per diem, lodging, or other miscellaneous travel expenses, associated with this Project.

### (4) Equipment

There are no equipment costs over \$500 associated with this Project.

### (5) Materials and Supplies

#### **Task 2 – Marketing and Promotion**

##### ***Task Funding - Reclamation \$0.00; Recipient \$1,250.00; Total \$1,250.00***

To promote the Program, MWDOC will, using its own funds (\$1,250.00), develop, print, and distribute at least 50,000 marketing materials and other supplies necessary to meet project goals. MWDOC has found, through a customer satisfaction survey, that the most effective means for potential participants to find out about water related rebate programs is through the extra promotional collateral they find in their water bills. To entice these participants to participate in this Program and replace inefficient equipment with advanced technology, Program information will be disseminated through their water bill inserts and promoted on social media using advertising campaigns through Facebook. Additionally, in 2017 MWDOC launched a new website that promotes available rebate programs in a user-friendly format, visit [www.mwdoc.com](http://www.mwdoc.com).

Currently, the established pricing (based on past pricing) for bill inserts is at \$0.025 each or a total for the Program of \$1,250 (50,000 inserts x \$0.025); however, this rate is subject to change per market fluctuation. Once produced, MWDOC will use Orange County's retail water agencies to distribute the promotional material.

The staff time and associated funding for Task 2 is already accounted for in Task 1. Of the direct costs for this task, MWDOC is funding the full \$1,250.00 and requesting \$0.00 from Reclamation.

### (6) Contractual and Construction

#### **Task 3 – Inspections**

##### ***Task Funding - Reclamation \$130,000.00; Recipient \$0.00; Total \$130,000.00***

Turf Removal Conversion sites will be provided with a pre and post installation verification inspection to determine eligibility for Program rebate funds. For Smart Timers, a minimum of 25% of the devices will be inspected in the field, in addition to verification via submitted receipts. This work will be performed by Mission Resource Conservation District (Mission), who is under contract with MWDOC until December 31, 2022. When this contract is nearing sunset, MWDOC will undergo a new competitive bid process consistent with MWDOC's administrative code and CFR §200.320. Mission, as a Non-Profit Special District and an arm of the Natural Resource Conservation Service, is uniquely qualified to perform irrigation audits. They have

many years' experience in both the urban and agricultural settings and provide MWDOC with highly competitive rates. A copy of a recent invoice submitted to MWDOC is included on page 36. Over the term of the agreement, it is estimated MWDOC will direct Mission to perform approximately 1,182 installation verification inspections. At a minimum, the installation verification will include databasing of the following: site contact information, intervention type, sector, device cost, rebate amount, installation date, make/model information (if applicable to device type), conversion square footage (if applicable to device type). Additional collected information may include the following, as applicable to device type: existing irrigation equipment, new irrigation equipment, site plan, water source (including modification if applicable to device type), conversion area measurement, landscape material (including modification if applicable), and site photographs depicting conversion area and existing irrigation equipment.

The total direct cost for the inspections requested from Reclamation for these commercial and residential installation verification inspections is \$130,000. Per the invoice below, Mission charges an average of \$110 per residential turf/timer site visit types including their administrative costs. For commercial installation verifications, Mission charges on a time and materials basis at a rate of \$59/hour, plus \$28/hour administration. MWDOC is requesting \$130,000 from Reclamation for this effort. The staff time associated with Task 3 is already accounted for in Task 1.



**Mission RCD**  
 130 E. Alvarado Street  
 Fallbrook, CA 92028  
 760.728.1332 fax 760.728.1331

Invoice No. 2887

**INVOICE**

**Customer**

Name	Municipal Water District of Orange County	Date	09/01/2020
Address	P.O. Box 20895	Order No.	
City	Fountain Valley State CA ZIP 92728	Rep	
Phone		FOB	

Hours	Description	Unit Price	TOTAL
<b>From: 08/01/2020 to 08/31/2020</b>			
<b>COMMERCIAL</b>			
0.00	Lance Andersen	\$59.00	\$0.00
0.00	Dustin Farrelly	\$59.00	\$0.00
0.00	Tom Norton	\$59.00	\$0.00
43.50	Mary, Toni - appointment and data entry	\$28.00	\$1,218.00
<b>RESIDENTIAL</b>			
<b>Timers</b>			
39.00	Verifications B	\$95.00	\$3,705.00
0.00	Double work orders	\$143.00	\$0.00
6.00	Double controllers	\$190.00	\$1,140.00
0.00	Double controllers + RN	\$238.00	\$0.00
0.00	Triple Controller	\$267.00	\$0.00
17.00	Turf Removal	\$95.00	\$1,615.00
2.00	No Show	\$65.00	\$130.00
0.00	MATERIALS		\$0.00
<b>Miles</b>			
0.0	Mileage for HOA's	\$0.575	\$0.00

SubTotal \$7,808.00

**Payment Details**

Cash  
 Check

Comment: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**TOTAL \$7,808.00**

Office Use Only

Save What We Have - Restore What We Had

Task 4- Rebate Incentives

*Task Funding - Reclamation \$1,850,000.00; Recipient \$4,678,600.00; Total \$6,528,600.00*

Over the 36-month period of the potential grant award, MWDOC proposes to facilitate sustainable landscape improvements across approximately 26 million square feet (605.5 acres) of landscaped area. To achieve this, the Program anticipates to rebate the conversion of up to 1.5 million square feet (34.5 acres) of turfgrass to a CA Friendly landscape; the upgrade of approximately 4,500 residential and 1,000 commercial (35,000 stations) antiquated irrigation timers to smart-water-application irrigation controllers (weather-based irrigation timers) collectively irrigating approximately 545 acres; and the conversion of approximately 12 commercial sites (24 dedicated irrigation meters) from utilizing a potable source to an alternative sustainable source (rainwater capture, stormwater runoff, recycled water) covering 26 acres of irrigated area. MWDOC proposes to provide incentives through a rebate-style format to residential property owners or commercial property owners/managers for qualifying conversions. Table 10 lists rebate amounts that will be available for each participant; these rebate levels may vary due to market transformation during the implementation-phase.

**Table 10. Detailed Rebate Incentives by Funding Sources**

Rebate Incentive	Incentive Rate	MWDOC	USBR	Quantity	MWDOC Funding	USBR Funding	Total Incentive
<b>Turf Removal (Res and CII)</b>	\$3/ft <sup>2</sup>	\$2	\$1	1,500,000 ft <sup>2</sup>	\$3,000,000	\$1,500,000	\$4,500,000
<b>Smart Timers (CII)</b>	\$45/station	\$35	\$10	35,000 stations	\$1,225,000	\$350,000	\$1,575,000
<b>Smart Timers (Res)</b>	\$80/ timer	\$80	\$0	4,500 timers	\$360,000	\$0	\$360,000
<b>Sustainable Source (CII)</b>	\$975/AFY	\$975	\$0	12 Sites (8 AFY/site)	\$93,600	\$0	\$93,600
<b>TOALS</b>					<b>\$4,678,600</b>	<b>\$1,850,000</b>	<b>\$6,528,600</b>

Rebate incentives shall be based on the square footage, device/material costs, or actual water savings. Rebates will never exceed the Participant’s cost of the device/installation. To receive the rebate funds, the Participant’s completed site conversion and irrigation system is required to be consistent with the intent of the Program. Additionally, the conversion area must remain in compliance with the conversion requirements for a minimum period of five years.

MWDOC will provide \$4,678,600.00, and the remaining \$1,850,000.00 is requested from Reclamation. The staff time and associated funding for Task 4 is accounted for in Task 1.

(7) Environmental and Regulatory Compliance Costs

There are no anticipated environmental compliance costs associated with this Project.

## (8) Other

### **Task 5 – Project Reporting**

#### ***Task Funding - Reclamation \$0; Recipient \$0; Total \$0***

Following the reporting schedule set forth in the agreement, MWDOC will submit semiannual reports and a comprehensive final report that will include all required SF forms, a written Project progress narrative, tabular data tables, and all required back-up to support the requested reimbursement. The funding for Task 5, semi-annual Project Reporting, is captured within Task 1 Program Administration.

### **Task 6 – Project Evaluation**

#### ***Task Funding - Reclamation \$0.00; Recipient \$0.00; Total \$0.00***

Evaluation of the Project is critical to maintaining the integrity and longevity of sustained use and the associated water savings to be achieved. To ensure that the Project is operating with the maximum integrity, 100% of the turf removal and drip participants will receive pre- and post-installation inspections, with a minimum of 25% of the smart timer/rotating nozzle receiving in-person post installation verification inspections; all projects are 100% verified through receipt collection. At the Project's conclusion, a robust statistical examination using regression analysis and methods for considering weather impacts will be performed to evaluate associated water savings, giving the water industry an opportunity to quantify water savings associated with this Project. This analysis will include a statistically significant population of participants and maintain 95% confidence. Staff time associated with this task is included in Task 1, Program Administration.

## Indirect Costs

There are no indirect costs associated with this Project proposal.

## Total Costs

The total project costs are \$6,873,447.42. MWDOC will provide funding in the amount of \$4,873,447.42, with \$2,000,000.00 requested from Reclamation. Table 11 summarizes the proposed contribution by Program Budget Category.



**Table 11. Budget by Source**

Budget Category	Task No.	Task Description	Recipient Funds	Reclamation Funds	Total
<b>Salaries and Benefits</b>					
Task 1		Program Administration	\$193,597.42	\$20,000.00	\$213,597.42
<b>Material and Supplies</b>					
Task 2		Marketing Promotions	\$1,250.00	\$0.00	\$1,250.00
<b>Contractual/Construction</b>					
Task 3		Inspections	\$0.00	\$130,000.00	\$130,000.00
Task 4		Rebate Incentive	\$4,678,600.00	\$1,850,000.00	\$6,528,600.00
<b>Other</b>					
Task 5		Project Reporting	\$0.00	\$0.00	\$0.00
Task 6		Project Evaluation	\$0.00	\$0.00	\$0.00
Task 7		Database Enhancement	\$0.00	\$0.00	\$0.00
<b>Total</b>			<b>\$4,873,447.42</b>	<b>\$2,000,000.00</b>	<b>\$6,873,447.42</b>

## Environmental and Cultural Resources Compliance

The proposed Program will not have effects on environmental and cultural resources. The Program includes retrofits to existing landscapes and no other construction activities. All landscape and irrigation equipment installations will not take place until Reclamation has instructed to begin. The following includes more detail on environmental and culture resources compliance.

**Impacts to surrounding environment:** The proposed Program will not negatively impact the surrounding environment. Under NEPA, this Program should qualify for a categorical exemption. The Program focuses on landscape and irrigation system improvements to existing urban landscape. It is anticipated that these improvements will result in water conservation and reduced dry-weather runoff and non-point source pollution leaving the Program area and entering the natural environment, including local streams and creeks leading to the Pacific Ocean.

**Threatened or endangered species and habitat.** There are no known endangered or threatened species or wetlands that will be negatively impacted by the Program or directly impacted within the area. This Program looks to increase watershed health through reductions in runoff and non-point source pollution, benefiting both terrestrial and aquatic threatened and/or endangered species and habitat.

**Clean Water Act:** Orange County has several water bodies that fall and/or potentially fall under CWA jurisdiction, such as the Santa Ana River, San Diego Creek, and their tributaries; the Bolsa Chica, Los Cerritos, and Huntington Beach Wetlands; and Newport Back Bay. This Program will have no negative impacts on these water bodies. The Program will have a positive impact by reducing urban runoff, specifically increasing onsite stormwater retention, while reducing stormwater runoff and non-point source pollution.

**Water delivery system:** The major regional components of the water delivery system in Orange County were constructed between the 1940s and 1960s. These facilities include the Diemer Filtration Plant, the Orange County Feeder, the East OC Feeder, and the West OC Feeder. The most recent major facilities added include the Allen-McColloch and South County Pipelines, which were constructed in the 1980s. Retail water agency delivery systems were built during this same timeframe, with the majority of expansion starting in the 1950s when there was a population more than 200,000. Today's population totals more than 3 million.

**Modification of irrigation system:** The Program will not result in modifications of or changes to individual features of an irrigation system such as headgates, canals, or flumes.

**National Register of Historic Places:** Orange County has 125 sites listed under the National Register of Historic Places. Any site requesting to participate in a MWDOC program must receive necessary permits and permissions before submitting an application, including City,

County and/or NRHP approvals, and agree to this condition by signing the terms and conditions of the Program to be eligible for participation.

**Archeological sites:** There are no known archeological sites that will be impacted by the proposed Program.

**Low income or minority populations:** The proposed Program will not have a disproportionately high or adverse effect on low income or minority populations. The Program will be offered equally to all residents in Orange County and, for residential customers, can cover up to the full cost of participation, therefore maximizing the opportunity for low income or minority participation.

**Indian sacred sites and tribal lands:** The proposed Program will not limit access to or ceremonial use of Indian sacred sites or result in other impacts to tribal lands.

**Invasive species:** The proposed Program will not contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known in Orange County. Within the landscape conversion (turf removal) component of the Program, evidence of invasive species at the site post implementation will deem the project ineligible for rebate. Information regarding invasive species and how to identify them is provided to customers participating in the landscape conversion component.

## Required Permits or Approvals

The Municipal Water District of Orange County is not aware of any required permits or approvals to implement the proposed Program. Program Participants, however, may be required to obtain a plumbing permit from their local city if modifications to the irrigation system point of connection are made as a result of participation. Because the Program will primarily focus on irrigation control components downstream of the point of connection, the need for a plumbing permit will be rare. Customers may also be required to obtain City, Homeowner Association, or other approvals and are required to obtain any required permits or approvals before applying for a MWDOC program and are required to conform to any City ordinance. The rebate program participant agreement that is required to participate contains language placing the permit requirements on the Participant, should a permit be required.

## Letters of Support

Attached are 18 letters of support for the Orange County Sustainable Landscapes Program from the following:

- California Assemblyman Choi
- California Assemblywoman Petrie-Norris
- California State Senator Bates
- California State Senator Umberg
- City of Brea
- City of Huntington Beach
- City of La Habra
- City of Newport Beach
- City of San Juan Capistrano
- El Toro Water District
- Mesa Water District
- Metropolitan Water District of Southern California
- Orange County Public Works
- Santa Ana Watershed Project Authority
- Trabuco Canyon Water District
- Surfrider Foundation
- US Representative Correa
- US Representative Lowenthal

STATE CAPITOL  
P.O. BOX 942849  
SACRAMENTO, CA 94249-0068  
(916) 319-2068  
FAX (916) 319-2168



September 14, 2020

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Ned Weakland  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

Subject: Support for Municipal Water District of Orange County's 2021  
WaterSMART: Water and Energy Efficiency Grant Application

Dear Mr. Weakland:

I am writing you in support of the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program (Program). The objective of the Program is to offer and promote sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes. The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip and rotating nozzles; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to a sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

I strongly encourage the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits,

STATE CAPITOL  
P.O. BOX 942849  
SACRAMENTO, CA 94249-0068  
(916) 319-2068  
FAX (916) 319-2168



including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

A handwritten signature in blue ink that reads "Steven S. Choi". The signature is written in a cursive style with a large, stylized "S" and "C".

Steven S. Choi, Ph.D.  
Assemblyman, AD 68

STATE CAPITOL  
P.O. BOX 942849  
SACRAMENTO, CA 94249-0074  
(916) 319-2074  
FAX (916) 319-2174

DISTRICT OFFICE  
19712 MACARTHUR BOULEVARD  
IRVINE, CA 92612  
(714) 668-2100  
FAX (714) 668-2104

**E-MAIL**

Assemblymember.Petrie-Norris@assembly.ca.gov

Assembly  
California Legislature



**COTTIE PETRIE-NORRIS**  
ASSEMBLYWOMAN, SEVENTY-FOURTH DISTRICT

**COMMITTEES**  
CHAIR: ACCOUNTABILITY AND  
ADMINISTRATIVE REVIEW  
APPROPRIATIONS  
JUDICIARY  
REVENUE AND TAXATION  
VETERANS AFFAIRS

September 14, 2020

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Ned Weakland  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

Subject: Support for Municipal Water District of Orange County's 2021 WaterSMART:  
Water and Energy Efficiency Grant Application

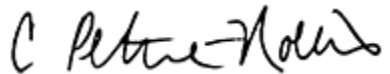
Dear Mr. Weakland:

I write in support of the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program (Program). The objective of the Program is to offer and promote sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes. The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip and rotating nozzles; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to a sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.



I strongly encourage the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

A handwritten signature in black ink, appearing to read "C Petrie-Norris". The signature is written in a cursive, flowing style.

Cottie Petrie-Norris

Assemblywoman, A.D. 74

CAPITOL OFFICE  
STATE CAPITOL, ROOM 305  
SACRAMENTO, CA 95814  
TEL (916) 651-4036  
FAX (916) 651-4936

DISTRICT OFFICES  
24031 EL TORO ROAD  
SUITE 201A  
LAGUNA HILLS, CA 92653  
TEL (949) 598-5850  
FAX (949) 598-5855

169 SAXONY ROAD  
SUITE 103  
ENCINITAS, CA 92024  
TEL (760) 642-0809  
FAX (760) 642-0814

SENATOR.BATES@SENATE.CA.GOV  
WWW.SENATE.CA.GOV/BATES

# California State Senate

SENATOR  
**PATRICIA C. BATES**  
THIRTY-SIXTH SENATE DISTRICT



COMMITTEES  
APPROPRIATIONS  
VICE CHAIR  
JOINT RULES COMMITTEE  
JOINT LEGISLATIVE BUDGET  
COMMITTEE  
JOINT LEGISLATIVE COMMITTEE  
ON EMERGENCY MANAGEMENT

September 11, 2020

U.S. Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Ned Weakland  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, Colorado 80225

Subject: Support for Municipal Water District of Orange County's 2021 WaterSMART: Water and Energy Efficiency Grant Application

Dear Mr. Weakland,

This letter is in support for the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program (Program). The objective of the Program is to offer and promote sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes.

The Program will encourage the conversion of turfgrass to a California friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip and rotating nozzles; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to sustainable sources such as recycled water and stormwater/runoff capture.

These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

I encourage the U.S. Bureau of Reclamation to award the requested funding to the Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

A handwritten signature in blue ink that reads "Patricia C. Bates".

PATRICIA C. BATES  
Senator, 36<sup>th</sup> District

CAPITOL OFFICE  
STATE CAPITOL, ROOM 3076  
SACRAMENTO, CA 95814  
(916) 651-4034  
DISTRICT OFFICE  
1000 E. SANTA ANA BLVD., STE. 220B  
SANTA ANA, CA 92701  
(714) 558-3785  
WWW.SENATE.CA.GOV/UMBERG  
SENATOR.UMBERG@SENATE.CA.GOV

# California State Senate

SENATOR  
**THOMAS J. UMBERG**  
THIRTY-FOURTH SENATE DISTRICT



STANDING COMMITTEES  
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JUDICIARY  
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HOUSING  
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SELECT COMMITTEES  
GROWING IMPACT OF  
ARTIFICIAL INTELLIGENCE IN CALIFORNIA  
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JOINT SELECT COMMITTEE ON  
THE 2020 US CENSUS  
CO-CHAIR  
AEROSPACE AND DEFENSE  
ASIAN PACIFIC ISLANDER AFFAIRS  
MANUFACTURED HOME COMMUNITIES  
JOINT COMMITTEES  
RULES

September 14, 2020

Attn: Mr. Ned Weakland  
Bureau of Reclamation  
Financial Assistance Management Branch  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

**RE: Support for Municipal Water District of Orange County's 2021 WaterSMART: Water and Energy Efficiency Grant Application**

Dear Mr. Weakland,

I am writing you in support of the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program (Program). The objective of the Program is to offer and promote sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes. The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip and rotating nozzles; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to a sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

I strongly encourage the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Thank you for your consideration.

Sincerely,

A handwritten signature in cursive script that reads "T. Umberg".

Thomas J. Umberg  
Senator, 34<sup>th</sup> District



## City of Brea

**September 10, 2020**

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Ned Weakland  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

**Subject:** Support for Municipal Water District of Orange County's 2021 WaterSMART: Water and Energy Efficiency Grant Application

Dear Mr. Weakland:

The City of Brea supports the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program (Program). The objective of the Program is to offer and promote sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes. The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip and rotating nozzles; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to a sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

The City of Brea strongly encourages the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

Brian M. Ingallinera  
Environmental Services Coordinator  
City of Brea

**City Council**

**Marty Simonoff**  
*Mayor*

**Steven Vargas**  
*Mayor Pro Tem*

**Cecilia Hupp**  
*Council Member*

**Christine Marick**  
*Council Member*

**Glenn Parker**  
*Council Member*



# CITY OF HUNTINGTON BEACH

## Public Works Department

Sean Crumby, PE  
Director of Public Works

September 3, 2020

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Ned Weakland  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

Subject: Support for Municipal Water District of Orange County's 2021 WaterSMART: Water and Energy Efficiency Grant Application

Dear Mr. Weakland:

The City of Huntington Beach supports the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program (Program). The objective of the Program is to offer and promote sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes.

The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip and rotating nozzles; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to sustainable sources such as recycled water and stormwater/runoff capture.

These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

The City of Huntington Beach strongly encourages the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

*Brian A. Ragland*

Brian A. Ragland, P.E.  
Utilities Manager  
City of Huntington Beach



## City of La Habra

*"A Caring Community"*

## PUBLIC WORKS

621 W. Lambert Rd.  
Post Office Box 337  
La Habra, CA 90633-0785  
Office: (562) 383-4170  
Fax: (562) 383-4497

**September 10, 2020**

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Ned Weakland  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225


**Subject: Support for Municipal Water District of Orange County's 2021 WaterSMART:  
Water and Energy Efficiency Grant Application**

Dear Mr. Weakland:

The City of La Habra supports the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program (Program). The objective of the Program is to offer and promote sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes. The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip and rotating nozzles; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to a sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

The City of La Habra strongly encourages the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

  
Elias Saykali  
Director of Public Works  
City of La Habra



**CITY OF NEWPORT BEACH**

100 Civic Center Drive  
Newport Beach, California 92660  
949 644-3311 | 949 644-3308 FAX  
[newportbeachca.gov/publicworks](http://newportbeachca.gov/publicworks)

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Ned Weakland  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

September 10, 2020

Subject: Support for Municipal Water District of Orange County's 2021 WaterSMART:  
Water and Energy Efficiency Grant Application

Dear Mr. Weakland:

The City of Newport Beach supports the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program (Program). The objective of the Program is to offer and promote sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes. The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip and rotating nozzles; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to a sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

The City of Newport Beach strongly encourages the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

Shane Burckle  
Watershed / Conservation Specialist  
City of Newport Beach

32400 PASEO ADELANTO  
SAN JUAN CAPISTRANO, CA 92675  
(949) 493-1171  
(949) 493-1053 FAX  
[www.sanjuancapistrano.org](http://www.sanjuancapistrano.org)



MEMBERS OF THE CITY COUNCIL

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September 8, 2020

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Ned Weakland  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

Subject: Support for Municipal Water District of Orange County's 2021 WaterSMART: Water and Energy Efficiency Grant Application

Dear Mr. Weakland:

The City of San Juan Capistrano supports the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program (Program). The objective of the Program is to offer and promote sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes. The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip and rotating nozzles; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to a sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

San Juan Capistrano encourages the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

Charles View, Assistant City Manager

*San Juan Capistrano: Preserving the Past to Enhance the Future*





# El Toro Water District

"A District of Distinction"

Serving the Public - Respecting the Environment

**September 3, 2020**

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Mike Gaskins  
Vice President

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Director

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Director

**General Manager**

Dennis P. Cafferty

**Treasurer**

Neely Shahbakhli

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Ned Weakland  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

**Subject: Support for Municipal Water District of Orange County's 2021 WaterSMART:  
Water and Energy Efficiency Grant Application**

Dear Mr. Weakland:

El Toro Water District supports the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program (Program). The objective of the Program is to offer and promote sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes. The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip and rotating nozzles; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

El Toro Water District strongly encourages the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

EL TORO WATER DISTRICT  
Dennis P. Cafferty  
General Manager



**MesaWater**  
DISTRICT®

*Dedicated to  
Satisfying our Community's  
Water Needs*

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*District Secretary*

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*District Treasurer*

**Atkinson, Andelson,  
Loya, Ruud & Romo**

*Legal Counsel*

1965 Placentia Avenue  
Costa Mesa, CA 92627  
tel 949.631.1200  
fax 949.574.1036  
info@MesaWater.org  
**MesaWater.org**

**September 9, 2020**

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Ned Weakland  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

Subject: Support for Municipal Water District of Orange County's 2021 WaterSMART: Water and Energy Efficiency Grant Application

Dear Mr. Weakland:

Mesa Water District (Mesa Water®) supports the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program (Program).

The objective of the Program is to offer and promote sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes. The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip and rotating nozzles; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to alternative sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

Mesa Water encourages the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

Justin Finch, MPP  
Water Use Efficiency Analyst



THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

Office of the General Manager

September 16, 2020

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Ned Weakland  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

Dear Mr. Weakland:

Support for Municipal Water District of Orange County's 2021  
WaterSMART: Water and Energy Efficiency Grant Application

The Metropolitan Water District of Southern California (Metropolitan) supports the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program (Program). The objective of the Program is to offer and promote sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes. The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip and rotating nozzles; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to a sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

Metropolitan strongly encourages the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

A handwritten signature in black ink, appearing to read "Bill McDonnell".

Bill McDonnell  
Manager, Water Efficiency Team

GVT:vsm



County Administration South  
601 North Ross Street  
Santa Ana, CA 92701

P.O. Box 4048  
Santa Ana, CA 92702

(714) 667-8800

info@ocpw.ocgov.com

OCPublicWorks.com



September 14, 2020

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Ned Weakland  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

Subject: Support for Municipal Water District of Orange County's 2021 WaterSMART: Water and Energy Efficiency Grant Application

Dear Mr. Weakland,

This letter is in support of the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program (Program). The objective of the Program is to offer and promote sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes. The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip and rotating nozzles; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

Within the South Orange County Watershed Management Area of Orange County, we work closely with MWDOC and other Integrated Regional Water Management Plan (IRWMP) partners to leverage the use of programs such as this, as we have seen firsthand how effective they are at helping to achieve IRWM goals. I strongly encourage the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

Grant Sharp, Manager  
South Orange County Watershed Management Area



# Santa Ana Watershed Project Authority

OVER 50 YEARS OF INNOVATION, VISION, AND WATERSHED LEADERSHIP

September 11, 2020

**Via Electronic Mail**  
rwaite@mwdoc.com

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Ned Weakland  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

**Subject: Support for Municipal Water District of Orange County's 2021 WaterSMART: Water and Energy Efficiency Grant Application**

Dear Mr. Weakland:

The Santa Ana Watershed Project Authority (SAWPA) supports the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program (Program). The objective of the Program is to offer and promote sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes.

The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip and rotating nozzles; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to a sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

SAWPA strongly encourages the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiently, and supports water supply reliability and energy savings. If you have any questions, please contact me at [rhaller@sawpa.org](mailto:rhaller@sawpa.org) or (951) 354-4240.

Sincerely,

Richard E. Haller, P.E.  
General Manager

David J. Slawson  
Chair  
Eastern Municipal  
Water District

Kati Parker  
Vice Chair  
Inland Empire  
Utilities Agency

Kelly E. Rowe  
Secretary-Treasurer  
Orange County  
Water District

Brenda Dennstedt  
Commissioner  
Western Municipal  
Water District

T. Milford Harrison  
Commissioner  
San Bernardino Valley  
Municipal Water District

Richard E. Haller, P.E.  
General Manager

STAFF MEMBERS

Fernando Paludi, General Manager  
Michael Perea, District Secretary  
Cindy Byerrum, District Treasurer  
Atkinson, Andelson, Loya, Ruud & Romo  
District General Legal Counsel



BOARD OF DIRECTORS

Michael Safranski, President  
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Glenn Acosta, Director  
Stephen Dopudja, Director  
Edward Mandich, Director

September 3, 2020

Bureau of Reclamation | Financial Assistance Management Branch

Attn: Mr. Ned Weakland

Mail Code: 84-27814

P.O. Box 25007

Denver, CO 80225

Subject: Support for Municipal Water District of Orange County's 2021 WaterSMART: Water and Energy Efficiency Grant Application

Dear Mr. Weakland:

Trabuco Canyon Water District (TCWD) supports the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program (Program). The objective of the Program is to offer and promote sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes. The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip and rotating nozzles; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to a sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

TCWD appreciates MWDOC's leadership within the Orange County water community and strongly encourages the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiently, and supports water supply reliability and energy savings.

Sincerely,

A handwritten signature in blue ink, appearing to read "F. Paludi", is written over a circular stamp or seal.

Fernando Paludi | General Manager  
Trabuco Canyon Water District

September 16, 2020

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Ned Weakland  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

Subject: Support for Municipal Water District of Orange County's 2021 WaterSMART: Water and Energy Efficiency Grant Application

Dear Mr. Weakland:

Surfrider Foundation South Orange County supports the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program (Program). The objective of the Program is to offer and promote sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes. The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip and rotating nozzles; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to a sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

Surfrider Foundation South Orange County strongly encourages the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,



Denise Erkeneff  
Chapter Coordinator

**J. LUIS CORREA**

46TH DISTRICT, CALIFORNIA

**WASHINGTON OFFICE**  
1039 LONGWORTH HOUSE OFFICE BUILDING  
WASHINGTON, D.C. 20515  
(202) 225-2965

**SANTA ANA DISTRICT OFFICE**  
2323 N. BROADWAY, SUITE 319  
SANTA ANA, CA 92706  
(714) 559-6190



**HOUSE COMMITTEE ON THE JUDICIARY**

SUBCOMMITTEE ON IMMIGRATION  
AND CITIZENSHIP

SUBCOMMITTEE ON COURTS,  
INTELLECTUAL PROPERTY AND THE INTERNET  
VICE CHAIR

**HOUSE COMMITTEE ON HOMELAND SECURITY**

SUBCOMMITTEE ON BORDER SECURITY,  
FACILITATION, AND OPERATIONS

SUBCOMMITTEE ON TRANSPORTATION  
AND MARITIME SECURITY  
CHAIR

**Congress of the United States**  
**House of Representatives**  
**Washington, DC 20515**

September 15, 2020

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Ned Weakland  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

Dear Mr. Weakland:

I support the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program (Program). The objective of the Program is to offer and promote sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes. The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip and rotating nozzles; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to a sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

I strongly encourage the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Respectfully,

A handwritten signature in blue ink that reads "J. Luis Correa".

J. LUIS CORREA

Member of Congress



**ALAN LOWENTHAL**

47TH DISTRICT, CALIFORNIA

**COMMITTEE ON NATURAL RESOURCES**

CHAIR, SUBCOMMITTEE ON ENERGY  
& MINERAL RESOURCES

SUBCOMMITTEE ON NATIONAL PARKS, FORESTS,  
& PUBLIC LANDS

SUBCOMMITTEE ON WATER, OCEANS, & WILDLIFE

**COMMITTEE ON**

**TRANSPORTATION & INFRASTRUCTURE**

SUBCOMMITTEE ON HIGHWAYS & TRANSIT

SUBCOMMITTEE ON WATER RESOURCES

SUBCOMMITTEE ON COAST GUARD & MARITIME

SUBCOMMITTEE ON RAILROADS, PIPELINES, &  
HAZARDOUS MATERIALS



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September 14, 2020

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Ned Weakland  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

Subject: Support for Municipal Water District of Orange County's 2021 WaterSMART: Water and Energy Efficiency Grant Application

Dear Mr. Weakland:

I am writing to encourage full and fair consideration for the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program (Program).

This Program will allow and encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip and rotating nozzles; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to a sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

Orange County, like the rest of the world, is not immune to Climate Change. The climate is getting hotter and dryer, resulting in longer droughts and an increased reliance on expensive imported water. This is an exciting opportunity for residents and landowners and I strongly encourage the United States Bureau of Reclamation to consider the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

Alan Lowenthal  
Member of Congress

## Official Resolution

An Official Board Resolution adopted by the MWDOC Board on September 16<sup>th</sup> is included on page 65.

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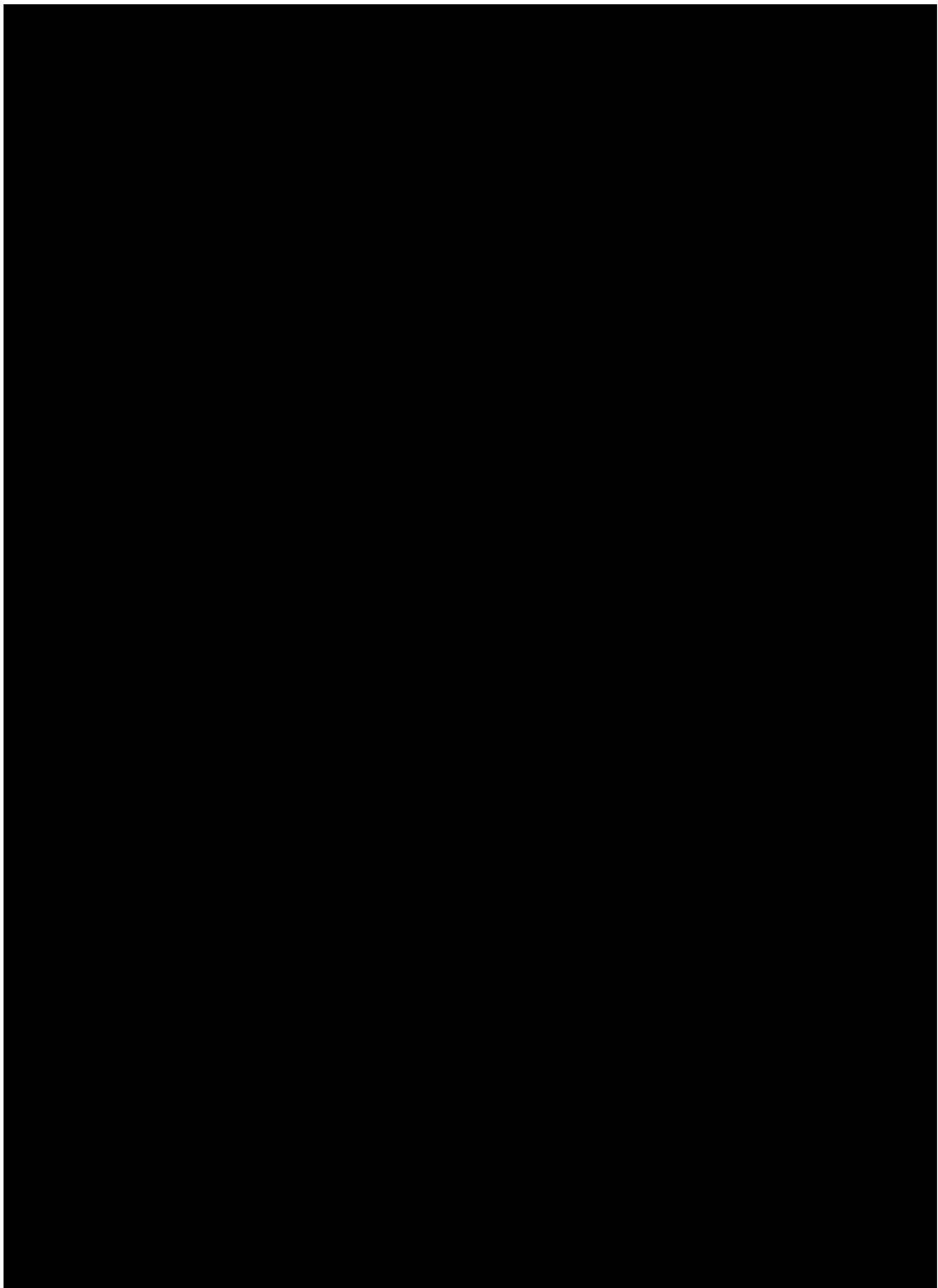
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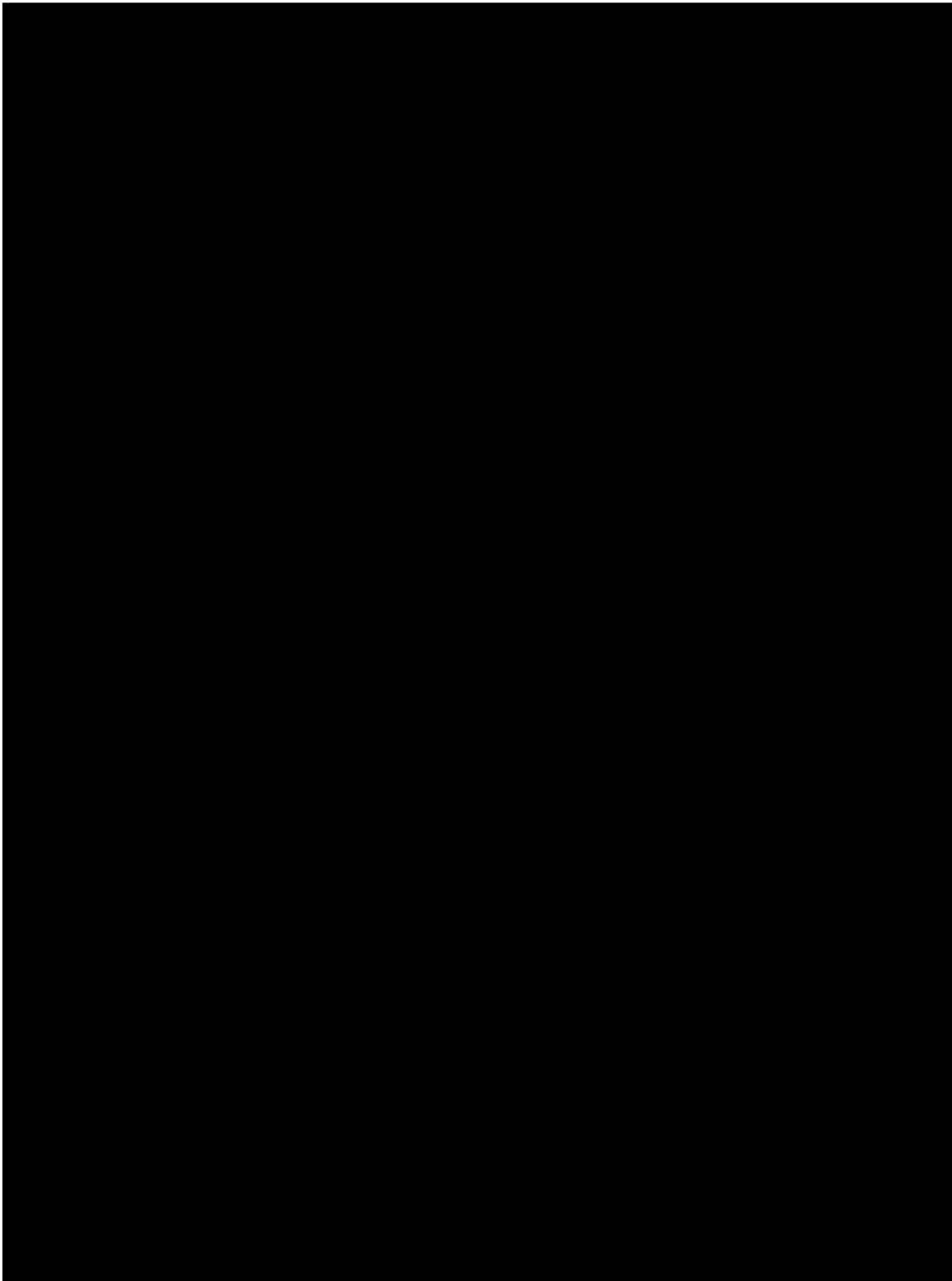
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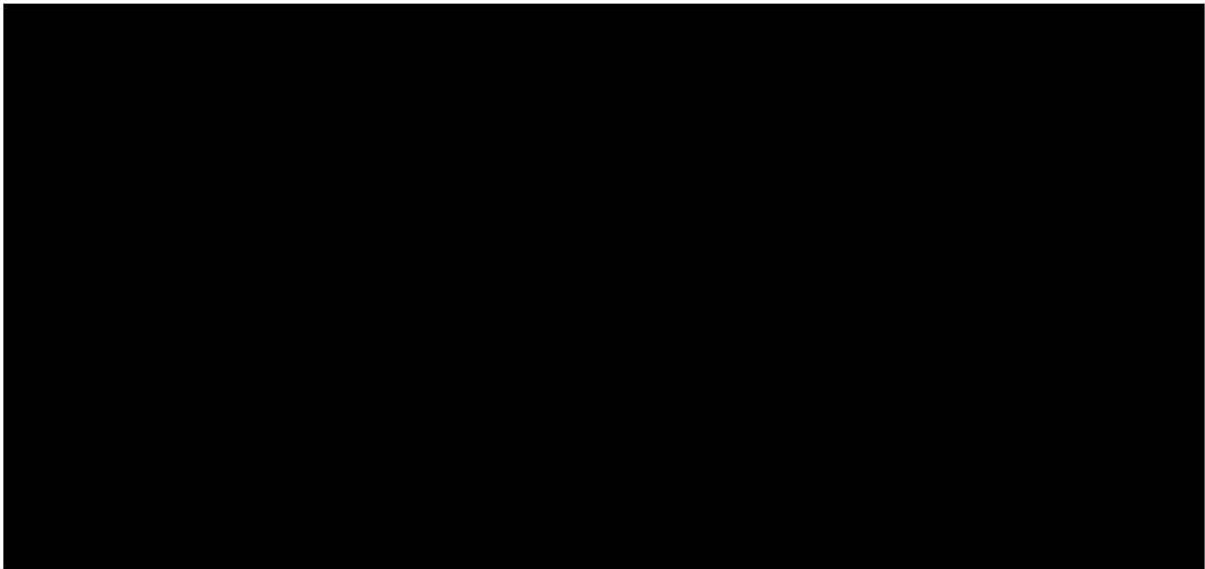
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